## **APPENDIX 6**

## **GUIDELINE ON REGISTRATION OF HEALTH SUPPLEMENTS**

#### **IMPORTANT NOTES:**

This guideline will serve as an additional reference guide for the registration of health supplement products, which consist of pharmaceutical active ingredients for human use as well as ingredients derived from natural sources.

Applicants are advised to refer to main **Drug Registration Guidance Document** for the common requirements for the preparation of a well-structured dossier application to be submitted for product registration.

#### **Contents:**

- 1. Definition
  - 1.1 Health Supplement (HS)
  - 1.2 Indication
  - 1.3 Route of Administration
  - 1.4 Exclusion from Health Supplement
  - 1.5 Exemption
- 2. Active Ingredients
- 3. <u>Maximum Daily Levels of Vitamins and Minerals for Adults Allowed in Health Supplements</u>
- 4. Health Supplement Claims
  - 4.1 Conditions
  - 4.2 Types and Evidence of Claims
  - 4.3 Claims Substantiation
  - 4.4 Illustrative Substantiation Evidence
- 5. Specific Dossier Requirement for Registration of Health Supplements Product validation
  - 5.1 Product Name
    - 5.1.1 List of Non-Permissible Product Name for Health Supplement Products
  - 5.2 Dosage Forms
  - 5.3 Active Ingredients
    - 5.3.1 Name of Active Ingredient
    - 5.3.2 Strength of active ingredient
    - 5.3.3 Source of Active ingredient
    - 5.3.4 Remarks on active ingredient (if any)
    - 5.3.5 Use of Protected/Endangered Ingredients

#### 5.3.6 Additional data to support new health supplement active ingredients

- 5.4 Any Animal Origin
- 5.5 Manufacturer
- 5.6 Contract Manufacturer
- 5.7 Second Source Information
- 5.8 Other Manufacturer
- 5.9 Imported Products
- 5.10 Product Containing Premix
- 5.11 Replacement Product

### **Administrative Data and Product Information**

## **SECTION A: PRODUCT PARTICULARS**

- 5.12 Product Description
- 5.13 Indication/Usage
- 5.14 Recommended Dose (Dose/ Use Instruction) & Route of administration
- 5.15 Contraindication
- 5.16 Warnings and Precautions
- 5.17 Drug Interactions
- 5.18 Pregnancy and Lactation
- 5.19 Side Effects/ Adverse Reactions
- 5.20 Signs and Symptoms of Overdose and Treatment
- 5.21 Storage Conditions
- 5.22 Shelf Life
- 5.23 Therapeutic Code (If any)

#### **SECTION B: PRODUCT FORMULA**

5.24 Batch Manufacturing Formula (BMF)

## **SECTION C: PARTICULARS OF PACKING**

5.25 Packaging

#### **SECTION D: LABELLING REQUIREMENTS**

- 5.26 Product label
- 5.27 Standard Labelling for Health Supplements
- 5.28 Prohibited Visual/ Graphics on Label
- 5.29 Package insert (Optional)

#### **SECTION E**

- 5.30 Product Owner
- 5.31 Letter of authorization from product owner
- 5.32 Letter of appointment of contract manufacturer and/or repacker
- 5.33 Letter of acceptance as contract manufacturer and/or repacker
- 5.34 Certificate of Pharmaceutical Product (CPP), Certificate of Free Sales (CFS) and Good Manufacturing Practice (GMP)
- 5.35 GMP/ CFS Template

## 5.36 Attachment of Protocol Analysis

### **SECTION P: DRUG PRODUCT**

- 5.37 Manufacturing process
- 5.38 Control of Critical Steps and Intermediate/In Process Quality Control (IPQC)
- 5.39 Finished Product Quality Control
  - Quality Control Test For Health Supplement Product
  - Certificate of Analysis of Finished Product
- 5.40 Stability Data

### **SECTION S: DRUG SUBSTANCE**

5.41 Specifications and Certificate of Analysis of Active Ingredient

**<u>Attachment 1</u>**: Checklist: Dossier Requirement for Health Supplements

**Attachment 2:** Table 17: Allowable Claims for Specific Active Ingredients in Health

**Supplements** 

## 1. **DEFINITION**

## 1.1 HEALTH SUPPLEMENT (HS)

Health Supplement (HS) refers to any product used to supplement a diet and to maintain, enhance and improve the health function of human body. It is presented in small unit dosage forms (to be administered) such as capsules, tablets, powder, liquids and shall not include any sterile preparations (i.e. injectable, eye drops). It may contain one or more, or the following combinations:

- i) Vitamins, minerals, amino acids, fatty acids, enzymes, probiotics, and other bioactive substances;
- ii) Substances derived from \*natural sources, including animal, mineral and botanical materials in the forms of extracts, isolates, concentrates, metabolite;
- iii) Synthetic sources of ingredients mentioned in (i) and (ii) may only be used where the safety of these has been proven.

#### 1.2 INDICATIONS

- i) Used as a Health Supplement;
- ii) Vitamin and mineral supplements for pregnant and lactating women.

#### 1.3 ROUTE OF ADMINISTRATION

Oral

#### 1.4 EXCLUSION FROM HEALTH SUPPLEMENTS:

Health Supplements shall **NOT** include:

- i) Any product as a sole item of a meal;
- ii) Any injectable and sterile preparation;
- iii) Any cells, tissues, organs or any substance derived from the human body;
- iv) Any substance listed in the Schedule of the Poison Act;
- v) Any other route of administration other than the oral route.

## 1.5 EXEMPTION FOR REGISTRATION

Extemporaneous preparations prepared and given directly to the patient by a healthcare practitioner during the course of treatment are exempted.

## 2. ACTIVE INGREDIENTS

Listed active ingredients can be checked at the NPRA website <a href="https://www.npra.gov.my/">https://www.npra.gov.my/</a> using Product Search.

# Classification of products containing Glucosamine, Chondroitin and Methylsulphonylmethane (MSM)

| No. | Product                               |  | Product              |                        | Product<br>Category                          | Route of<br>Evaluation   | Condition on<br>Product<br>Indication | Remark |
|-----|---------------------------------------|--|----------------------|------------------------|--|--|---------------------------------------|--------|
|     |                                       | As single<br>active<br>ingredient  | ОТС                  | Full<br>evaluation     | As adjuvant<br>therapy for<br>osteoarthritis | Products containing glucosamine in combination with  |                                       |        |
| 1.  | Products<br>containing<br>Glucosamine | As<br>combination<br>with<br>Chondroitin<br>and/ or MSM                    | ОТС                  | Full<br>evaluation     | As adjuvant<br>therapy for<br>osteoarthritis | combination with other health supplement ingredients are only allowed to be registered for therapeutic purposes and NOT allowed to be registered as Health Supplement Product. |                                       |        |
| 2.  | Products<br>containing<br>Chondroitin | As single ingredient  OR  In combination with other supplement ingredients | Health<br>supplement | Abridged<br>Evaluation | No<br>therapeutic<br>claims are<br>allowed   | -  |                                       |        |
| 3.  | Products<br>containing<br>MSM         | As single ingredient  OR  In combination                                   | Health<br>supplement | Abridged<br>Evaluation | No<br>therapeutic<br>claims are<br>allowed   | -  |                                       |        |

| No. | Product                            | Product<br>Category  | Route of<br>Evaluation | Condition on<br>Product<br>Indication | Remark |
|-----|------------------------------------|----------------------|------------------------|---------------------------------------|--------|
|     | with other supplement              |                      |                        |                                       |        |
|     | ingredients                        |                      |                        | No                                    |        |
|     | combination<br>with<br>Chondroitin | Health<br>supplement | Abridged<br>Evaluation | therapeutic<br>claims are<br>allowed  | -      |

References: Circulars

(i) *Bil* (66) *dlm BPFK/02/5/1.3* 

Produk yang Mengandungi Glucosamine dan Chondroitin (14 November 2006)

(ii) *Bil.* (20) *dlm.BPFK/PPP/01/03* 

Produk yang mengandungi Glucosamine, Chondroitin dan Methylsulfonylmethane (MSM) (31 December 2008)

# 3. MAXIMUM DAILY LEVELS OF VITAMINS AND MINERALS FOR ADULTS ALLOWED IN HEALTH SUPPLEMENTS

| NO. | VITAMINS & MINERALS                | UPPER DAILY LIMIT |
|-----|------------------------------------|-------------------|
| 1.  | Vitamin A                          | 5000 IU           |
| 2.  | Vitamin D                          | 1000 IU           |
| 3.  | Vitamin E                          | 800 IU            |
| 4.  | Vitamin K (K1 and K2) <sup>1</sup> | 0.12mg            |
| 5.  | Vitamin B1 (Thiamine)              | 100 mg            |
| 6.  | Vitamin B2 (Riboflavine)           | 40 mg             |
| 7.  | Vitamin B5 (Panthothenic Acid)     | 200 mg            |
| 8.  | Vitamin B6 (Pyridoxine)            | 100 mg            |
| 9.  | Vitamin B12 (Cyanocobalamin)       | 0.6 mg            |
| 10. | Vitamin C (Ascorbic Acid)          | 1000 mg           |
| 11. | Folic Acid                         | 0.9 mg            |
| 12. | Nicotinic Acid                     | 15 mg             |
| 13. | Niacinamide (Nicotinamide)         | 450 mg            |
| 14. | Biotin                             | 0.9 mg            |

| NO. | VITAMINS & MINERALS | UPPER DAILY LIMIT |
|-----|---------------------|-------------------|
| 15. | Boron               | 6.4 mg            |
| 16. | Calcium             | 1200 mg           |
| 17. | Chromium            | 0.5 mg            |
| 18. | Copper              | 2 mg              |
| 19. | Iodine              | 0.3 mg            |
| 20. | Iron <sup>2</sup>   | 20 mg             |
| 21. | Magnesium           | 350 mg            |
| 22. | Manganese           | 3.5 mg            |
| 23. | Molybdenum          | 0.36 mg           |
| 24. | Phosphorus          | 800 mg            |
| 25. | Selenium            | 0.2 mg            |
| 26. | Zinc                | 15 mg             |

#### Note:

- 1. Vitamin K (K1 and K2) is restricted only for combination with other vitamins and minerals in oral preparations. Vitamin K (K1 and K2) as a single ingredient in an oral preparation is not allowed.
- 2. For pre and antenatal use, as part of a multivitamin and mineral preparation, levels higher than the 20mg limit established for adults may be permitted at the discretion of the Authority.
- 3. Any form of fluoride as an ingredient is not permitted in formulation of health supplement products.

## 4. HEALTH SUPPLEMENT CLAIMS

#### 4.1 CONDITIONS

All claims made for health supplements (HS) shall:

- i) be consistent with the definition of HS;
- ii) enable consumers to make an informed choice regarding products;
- iii) not be misleading or false;
- iv) support the safe, beneficial and appropriate use of the product;
- v) maintain the level of scientific evidence proportional to the type of claims;
- vi) be for health maintenance and promotion purpose only;

vii) not be medicinal or therapeutic in nature, such as implied for treatment, cure or prevention of disease.

#### 4.2 TYPES AND EVIDENCE OF CLAIMS

A health supplement claim refers to the beneficial effects of consuming HS to promote good health and well-being (physical and mental) by providing nutrition, enhancing body structure/ function, relieving physiological discomfort and/or reducing the risk of health related conditions or diseases.

Types of HS claims are:

- General or Nutritional Claims (<u>Table 1</u>);
- Functional Claims (medium) (<u>Table 2</u>);
- Disease Risk Reduction Claims (high) (*Table 3*).

For a HS product making a General or Functional Claim on vitamin(s) and/or mineral(s), it must contain a minimum of 15% of the Codex Nutrient Reference Value (NRV) per daily dose of the vitamin(s) and/or mineral(s). Other ingredients must be substantiated by supporting evidence.

For example, if the vitamin content is less than 15% NRV, the specific claim for this vitamin is not allowed unless there is evidence to support the claimed effect below this value.

For a HS product with Disease Risk Reduction Claim, it must be substantiated by supporting evidences.

**Table 1: General or Nutritional Claims** 

| Table 1. dell                       | adie 1: General of Nutritional Claims  |                                  |                                       |   |  |  |
|-------------------------------------|--|----------------------------------|---------------------------------------|---|--|--|
| Level of claim                      | Definition   | Examples/<br>Wording of<br>claim | Criteria                              | Evidence to substantiate HS claims  |  |  |
| General or<br>Nutritional<br>Claims | Maintenance  | healthy growth                   | established nutrition<br>knowledge in | following evidences:  |  |  |
|                                     | <ul> <li>General Health         Maintenance</li> <li>Benefits derived         from         supplementation         beyond normal         dietary intake</li> </ul> | 1                                |                                       | i) Standard reference e.g. reference textbooks, pharmacopoeia, monographs ii) Recommendations on usage from reference regulatory authorities or reference organisations |  |  |
|                                     |  | strengthening<br>the body        |                                       |   |  |  |

Please refer to 4.4 Illustrative Substantiation Evidence List for the list of acceptable references, organisations and authorities.

## **Table 2: Functional Claims (medium)**

Claims must be adequately substantiated through ingredient-based evidence, and when necessary, through product-based evidence.

| Types of HS claim                | Definition  | Examples/<br>Wording of<br>claims   | Criteria  | Evidence to substantiate HS<br>Claims   |
|----------------------------------|---|---|---|---|
| Functional<br>Claims<br>(medium) | Maintains or enhances the structure or function of the human body, excluding disease-related claims | Acceptable claims based on the single ingredient e.g. • Vitamin A helps to maintain growth, vision and tissue development • Vitamin D helps in normal development and maintenance of bones and teeth. • Chondroitin helps to promote healthy joints | For claims on established nutrients and ingredients such as vitamins & minerals with daily recommended values  • Meet the conditions for nutrient function claims as set by the Authority  • Claims have consistent scientific support according to scientific review and evaluation  • In accordance to HS principles and practice in Malaysia | 1 or more of the following evidence:  i) Standard reference e.g. reference textbooks, pharmacopoeia, monographs  ii) Recommendations on usage from reference regulatory authorities or reference organisations  iii) Good quality scientific evidence from human observational studies (refer to ASEAN Guidelines on efficacy data requirement) (only in the event that human experimental study is not ethical, animal studies will be accepted together with epidemiological studies or other scientific literature and documented traditional use)  iv) Peer-reviewed scientific data or meta-analysis |

Refer to 4.4 Illustrative Substantiation Evidence List for the list of acceptable references, organisations and authorities.

Table 3: Disease risk reduction (high)

| Types of<br>HS claim         | Definition   | Examples/ Wording of claims   | Criteria   | Evidence to substantiate HS<br>Claims   |
|------------------------------|--|---|--|---|
| Disease<br>risk<br>reduction | Significantly altering or reducing a risk factor of a disease or health related condition. | <ul> <li>Helps to reduce risk of osteoporosis by strengthening bone</li> <li>Helps to reduce the risk of dyslipidaemia</li> </ul> | <ul> <li>The relationship between the HS ingredient or product and disease risk reduction is supported by consistent scientific evidence</li> <li>Documented in authoritative reference texts</li> <li>Recognised by the Authority reference or international organisations or regulatory authorities</li> <li>Adheres to the key principles of HS claims</li> </ul> | i) Scientific evidence from human intervention study on ingredient and/or product ii) Toxicological study (chronic) iii) Pharmacological study  At least 1 additional evidence: i) Standard reference e.g. reference textbooks, pharmacopoeia, monographs etc. ii) Recommendations on usage from reference regulatory authorities or reference organisations iii) Evidence from published scientific reviews or metaanalysis iv) Report prepared by expert committees/ expert opinion (subject to the Authority approval) |

Refer to 4.4 Illustrative Substantiation Evidence List for the list of acceptable references, organisations and authorities

### 4.3 CLAIMS SUBSTANTIATION

Claims must be in line with the respective HS principles and supported by adequate evidence. To reflect the all available usage evidence (including relevant scientific evidence), the evidence shall be summarized as part of the substantiation document for the claim presented in the **Table 4** below:

**Note:** Evidence not summarised and presented in the above format will not be further evaluated

| Product/   | Dosage and     | Duration                  | Type of                      | Study   | Study   | Summary  | Limitations   | Sour  | ce of evidence   |
|------------|----------------|---------------------------|------------------------------|---|---|--|---|---|--|
| Ingredient | administration | of                        | evidence                     | design  | population  | of findings  | of the study  | i)  | Author   |
| studied    | route          | treatment                 | (scientific                  |   |   |  |   | ii)   | Title  |
|            |                |                           | evidence)                    |   |   |  |   | iii)  | Publication  |
|            |                |                           |                              |   |   |  |   |   | details  |
|            |                |                           |                              |   |   |  |   | iv)   | Year   |
|            |                |                           |                              |   |   |  |   | v)  | Type (text,)   |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            |                |                           |                              |   |   |  |   |   |  |
|            | Ingredient     | Ingredient administration | Ingredient administration of | Ingredient administration of evidence studied route treatment (scientific | Ingredient administration of evidence treatment (scientific | Ingredient administration of evidence treatment (scientific population | Ingredient administration of evidence treatment (scientific population population of findings | Ingredient studied route of evidence cscientific design population of findings of the study | Ingredient studied administration route of treatment (scientific evidence) design population of findings ii) iii) iii) |

#### 4.4 ILLUSTRATIVE SUSBSTANTIATION EVIDENCE LIST

#### Reference texts

- a. Martindale, latest edition. The Complete Drug. Pharmaceutical Press, 2009.
- b. The ABC Clinical Guide to Herbs. American Botanical Council
- c. WHO Monographs on Selected Medicinal Plants
- d. British Pharmacopoeia
- e. United States Pharmacopoeia
- f. Indian Pharmacopoeia
- g. Chinese Pharmacopoeia
- h. Natural Standards (www.naturalstandard.com)
- i. Office of Dietary Supplements, National Institutes of Health Dietary Supplement Fact Sheets (<a href="https://ods.od.nih.gov/factsheets/list-all/">https://ods.od.nih.gov/factsheets/list-all/</a>)

#### **Organisations**

- a. American Botanical Council (www.herbalgram.org).
- b. American Nutraceutical Association
- c. CODEX Alimentarius
- d. Global Information Hub for Integrated Medicine (<a href="http://www.globinmed.com">http://www.globinmed.com</a>)
- e. National Centre for Complementary and Alternative Medicine (<a href="http://nccam.nih.gov/">http://nccam.nih.gov/</a>)
- f. Office of Dietary Supplements, National Institutes of Health (USA) (<a href="http://ods.od.nih.gov">http://ods.od.nih.gov</a>)

### Reference regulatory authorities

- a. Australia TGA
- b. Chinese Health Authority on Chinese medicinal herbs
- c. European Commission
- d. Health Canada
- e. United States FDA

#### Notes:

- 1. This list is not meant to be exhaustive and will be reviewed from time to time.
- 2. The Authority will conduct a detailed evaluation of the evidence included in the report to ensure that the health claim is substantiated.
- 3. The Authority will consider review other than those listed above, if the standards of evidence are consistent with those of the Authority.
- 4. All references must be current.

# 5. SPECIFIC DOSSIER REQUIREMENT FOR REGISTRATION OF HEALTH SUPPLEMENTS

## **PRODUCT VALIDATION**

#### **5.1** Product Name

- The product name may include product name, dosage form and strength (e.g. XYZ Capsule 500mg)
- Dosage form and strength of product are required to be part of the product name to allow for multiple dosage forms (e.g. tablet, capsule) and strengths (e.g. 200mg and 400mg) for any particular named (proprietary or generic) product.
- If a registered product name is found to be similar to another registered product, NPRA reserves the rights to request for the change in the product name.
- Product with more than one (1) active ingredient should not include the strength of active ingredients in the product name.
- The product name may include the brand name or trademark name, if applicable.
- Any product name that is the same or similar either in writing or pronunciation, with the product name of an adulterated product is prohibited.

5.1.1 List of Non-Permissible Product Name for Health Supplement Products

| No. | Issue  | Example   |
|-----|--|---|
| 1.  | Prohibited use of disease names as stated in the Medicines (Advertisement and Sale) Act 1956 (revised 1983)  | Diabetes, Asthma, Cancer  |
| 2.  | Prohibited use of a single active ingredient as a product name in products containing more than one active ingredient unless product name contains words such as 'Plus, Compound, Complex, Herbanika | If the product contain Vitamin C, Vitamin E and Fish Oil  Product name: "Vitamin C" is not allowed but product name: "Vitamin C Plus" is allowed. |
| 3.  | Prohibited use of superlative Names that indicates superiority or inefficacy   | Power, Superior, Pure, Mustajab, Safe,<br>Healthy, Penawar, VIP, Good, World<br>Number 1  |

| No. | Issue  | Example  |
|-----|--|--|
| 4.  | Prohibited use of spelling of words that may cause confusion  i) Words that involve names of/ part thereof:  20 disease names prohibited in the Medicines (Advertisement and Sale) Act 1956 (Revised 1983)  ii) Other diseases without scientific proof iii) Prohibited indication | Go Out = GOUT (label) Utix   |
| 5.  | Prohibited use of names that may cause ambiguity Ambiguous product name  | B For Energy?  |
| 6.  | Prohibited use of names that may be offensive or indecent  | SENXBIG=SEnXBIG (label) Sexy, Enjoy, Paradise, Heavenly, Blue boy, Casanova, Desire                      |
| 7.  | Product name not congruent with the active ingredient  | The active ingredient is Evening Primrose oil (EPO) and the product name: "Marine tablet" is not allowed |
| 8.  | Prohibited use of product names that has elements of ludicrous belief Statements referring to ancient beliefs/ negative spirits/ supernatural power  | Words such as miracle, magic, magical, miraculous, saintly, heavenly                                     |
| 9.  | Prohibited use of product names similar to the existing approved product names  Product name similar to the spelling and pronunciation of words of existing product names  | Elegen vs L-gen vs L-jen Forte vs Fort   |
| 10. | Prohibited use of product names that may cause ambiguity in the nature of product (drug/ food/beverage)  Product name similar to a food/ beverage name   | Juice, Health drink, Beverage, Kooky   |

| No. | Issue  | Example   |
|-----|--|---|
| 11. | Prohibited use of product names that represents professional advice or opinion           | Dr Sunny, Professor   |
| 12. | Product name that symbolizes a claim   | Vigour, Youthful, High, Hi  |
| 13. | Product name that uses strength but formulation contains more than one active ingredient | If the product contains multivitamins and minerals.  Product name: "XXX multivitamins and minerals 500mg" is not allowed. |
| 14. | Other prohibited product names   | Minda, IQ, Smart, Unique, Ultra Mega,<br>Detox, Defence, Immunity   |
| 15. | Names of organs and brain  | Heart, kidney, skin, liver  |

## Note:

- 1. This list is not meant to be exhaustive and will be reviewed from time to time.
- 2. The Authority reserves the right to disallow any other words, phrases or graphics for product label, which in its opinion is misleading, improper or not factual.

### 5.2 Dosage Forms

- Allowed dosage forms include:
  - a) <u>Tablets</u>

Caplet, lozenge, chewable tablet, dispersible tablet, effervescence tablet, uncoated tablet, enteric coated tablet, sugar coated tablet, film coated tablet, extended release tablet;

- b) <u>Capsules</u>
  - Soft capsule, hard capsule, enteric coated capsule, chewable soft capsule, extended released capsule;
- c) <u>Powder/ Granules</u>
- d) Liquid

Emulsion, syrup, spray, suspension.

- Products in the shape of animal dosage forms are not allowed.
- Supporting data from established references (e.g. Standard Pharmacopeia) shall be required for a new dosage form.
- The form that correctly describes it in terms of its product quality control specifications and performance shall be selected.
- A separate application for registration is required for each dosage form.
- The following documents are required during submission of product dossier for sustained-release/ extended-release/ timed-release dosage form
  - i) Protocol of analysis;
  - ii) In-Process Quality Control (IPQC);
  - iii) Finished Product Specification (FPQC);
  - iv) Certificate of Analysis (COA).

### 5.3 Active Ingredients

#### 5.3.1 Name of Active Ingredient:

- Please select active ingredient from the search database. If the substance is not listed, please select the "Not Listed Ingredient" button. An automatic email will be sent to NPRA for notification.
- Approved names and pharmacopoeia names of ingredients shall be used whenever possible.

#### 5.3.2 **Strength of active ingredient:**

• To enter the content of active ingredients (numerical) and then select the weights and measures from the given list.

- Content of the ingredients shall be expressed accordingly in the following manner:
  - a. quantity per unit dose (e.g. for unit dose formulations tablet, capsule, lozenge, etc.)
  - b. percentage composition (%w/w, %w/v, %v/v, etc.)
  - c. weight per ml. (e.g. for solutions, suspension etc.)
  - d. quantity (percentage or amount) per measured dose (e.g. oral liquids, drops, etc.)
- Metric weights and measures shall be used.

### **5.3.3 Source of Active ingredient:**

To specify the source such as animal, plant, synthetic or others (to specify)

#### 5.3.4 Remarks on active ingredient (if any):

- To specify the equivalent/providing amount of active component from the raw material (e.g. Sodium ascorbate 520 mg providing.... Vitamin C)
- Declaration of species name from natural source (plant, animal or others)

#### 5.3.5 <u>Use of Protected / Endangered Ingredients</u>

### a) Protected/ Endangered Wildlife Species

It is the responsibility of the applicant to ensure that the ingredient(s) derived from wildlife species, its parts and derivatives used in the formulation **COMPLIES** with the Wildlife Conservation Act 2010 (Act 716) and International Trade in Endangered Species Act 2008 (Act 686). Both guidelines can be downloaded at the PERHILITAN website (<a href="http://www.wildlife.gov.my">http://www.wildlife.gov.my</a>).

The applicant shall contact the following department to obtain the necessary permit/ license. A copy of the permit/ license shall be submitted with the application form for product registration.

Department of Wildlife and National Parks, Peninsular Malaysia Km. 10, Jalan Cheras, 56100 Kuala Lumpur,

Tel: +603-90866800, Fax: +603-90753873

### b) Endangered Botanical Species

It is the responsibility of the applicant to declare the source of the botanical ingredient if it is listed under the International Trade in Endangered Species Act 2008 (Act 686). If the ingredient is from a local source, a special permit/ license shall be obtained from the:

Division of Protection and Quarantine of Plants, Department of Agriculture, Tingkat 1-3, Wisma Tani, Jalan Sultan Salahuddin, 50632 Kuala Lumpur. Tel: +603 - 20301400, Fax: +603 - 26913550.

101 - 000 2000 1 100) 1 am - 000 200 1000 01

## 5.3.6: Additional data to support new health supplement active ingredients

| No. | Types of documents  | Checklist  |
|-----|---|--|
| 1.  | Standard/ established references  | Martindale, Pharmacopeias, Monograph etc.  |
| 2.  | Information from the competent authorities of reference countries                     | <ul> <li>Information shall be provided from the competent authorities of reference countries (Refer to 9.6.5)</li> <li>Example of supporting documents:         <ul> <li>Registration status and maximum registered dosage as health supplement</li> <li>established monograph</li> <li>GRAS status</li> </ul> </li> </ul> |
| 3.  | Clinical studies or scientific evidences  |  |
| 4.  | Non-clinical studies to support long term-use   | <ul><li>Full published articles</li><li>Unpublished data may be considered</li></ul>   |
| 5.  | Toxicology studies with the determination of NOAEL (No observed adverse effect level) | Mandatory for high claim   |
| 6.  | Pharmacological study   |  |
| 7.  | Justification for the use of new active ingredient as health supplement               |  |
| 8.  | Registration status worldwide   | Registered and Marketed Date   |

**Note:** The documentation must support the safety use and dose of new active ingredients as a health supplement.

## 5.4 Any Animal Origin

Any source from animal origin must be declared and the type of animal must be specified.

## 5.5 Manufacturer

The requirements for Good Manufacturing Practice (GMP) for the manufacturers are in **Table 5** below:

Table 5:

| Level of claims        | Requirements for GMP   |
|------------------------|--|
| General/ Functional    | a) Malaysia Guidelines on Good Manufacturing Practice for<br>Traditional Medicine and Health Supplement latest edition.<br>Or  |
|                        | b) The accepted standards for GMP will be determined by the category the product is classified in the country of origin.  For example, if the product is classified as food in the country of origin, GMP certificate of food standard issued by relevant country authority will be accepted on condition that the standards are similar to those practices in Malaysia.  Or |
|                        | c) If the product is not regulated in the country of origin and does not require GMP certification, the manufacturer will have to produce a GMP certificate issued by an independent body recognised by the Authority. Information including the standard/regulations/legislation to which the inspection was based upon must be mentioned.                                  |
| Disease Risk Reduction | a) Malaysia Guidelines on Good Manufacturing Practice for<br>Traditional Medicine and Health Supplement latest edition<br>Or   |
|                        | b) The Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme (PIC/S) Standards.  Or   |
|                        | c) GMP certificates issued by relevant country authority will be accepted on condition that the standards are similar to PIC/S Standards   |

## 5.6 Contract Manufacturer

Contract manufacturer is applicable when the product owner is not the product manufacturer.

#### 5.7 Second Source Information

An application for a second source may be considered when deemed necessary. This second source product shall be the same as the first product in all respects except for the site of manufacture.

#### 5.8 Other Manufacturer

Any manufacturer involved in assembly, fill & finish, active ingredients, packing, labeling etc.

## 5.9 Imported Products

Imported product needs to be declared.

## 5.10 Product Containing Premix

Premixed active ingredient(s) is a combination of two or more active ingredients that are previously manufactured by a different manufacturer.

Certificate of GMP for manufacturer/ supplier is required for the premixed ingredient(s) in formulation. The requirements for GMP are same as in Table 5 as above.

## **5.11** Replacement Product

A PRH is not allowed to register/ hold two or more products with similar formulation (same active ingredient of raw material, strength and dosage form) at any one time, except for product variants.

A letter of justification for replacement by the PRH is required.

### ADMINISTRATIVE DATA AND PRODUCT INFORMATION

#### SECTION A: PRODUCT PARTICULARS

## 5.12 **Product Description**

Beriefly state the **visual and physical characteristics** of the product, according to **Table 6** below (where applicable):

| No. | Dosage Form | Description  |  |
|-----|-------------|--|--|
| 1.  | Tablet      | Shape, size, colour, odour, taste, marking, emboss, type of table (e.g. coated, uncoated, film, sugar etc.)                        |  |
| 2.  | Capsule     | Shape, size, colour, odour, taste, marking, emboss, coating, content of capsule, type of capsule (e.g.: soft, hard, chewable etc.) |  |
| 3.  | Liquid      | Clarity, type (e.g. solution/ suspension/ emulsion etc.), taste, odour, colour.  |  |
| 4.  | Powder      | Colour, odour, taste etc.  |  |
| 5.  | Pill        | Colour, odour, taste, size etc.  |  |
| 6.  | Granules    | Colour, odour, taste, size etc.  |  |

## 5.13 Indication/Usage

Briefly state the recommended use(s) of product. The following indications are allowed:

- Used as a Health Supplement; or
- Vitamins and mineral supplements for pregnant and lactating women.

## 5.14 Recommended Dose (Dose/ Use Instruction) & Route of administration

State the dose (normal dose, dose range) and dosing schedule (frequency, duration if applicable). Dosage for adults and children (where appropriate) shall be stated.

## 5.15 <u>Contraindication</u>

State conditions for which or under which the product shall not be used.

Indicate clearly conditions that are:

- absolutely contraindicated,

- contraindicated but may be used under special circumstances and what precautions should be taken in such cases.
- If no information is available for this section, state "Unknown".

## 5.16 Warnings and Precautions

Briefly state warnings and precautions necessary to ensure safe use of the product, e.g. caution against giving to children and elderly; use in pregnancy and lactation; in infants; etc.

If no information is available for this section, state "Unknown".

## 5.17 **Drug Interactions**

State only interactions that are observed and/or for which there is potential clinical significance. Interactions may occur with

- other medicinal products used;
- other herbs/ substance;
- meals, or specific types of food.

If no information is available for this section, state "Unknown".

## 5.18 **Pregnancy and Lactation**

State any effect on pregnancy and lactation, if applicable.

### 5.19 Side Effects / Adverse Reactions

State in order of severity and frequency, the side effects, adverse reactions, toxic effects, etc. (i.e. reactions, toxic effects, other than those desired therapeutically). This included reactions such as allergy, hypersensitivity, dependence, addiction, carcinogenicity, tolerance, liver/ kidney toxicity, etc.

Indicate symptoms and sites of effects/reactions.

- Reactions, whether minor or serious, shall be stated.
- Severity, reversible, frequency of occurrence shall be indicated wherever possible.
- Clinical tests for detection of 'sensitive' patients, measure for management of adverse reactions developed shall be described wherever possible.

If no information is available for this section, state "Unknown".

## 5.20 Signs and Symptoms of Overdose and Treatment

Briefly state symptoms of overdose/ poisoning, and where possible, recommended treatment and antidotes for overdose/ poisoning.

If no information is available for this section, state "Unknown".

## **5.21 Storage Conditions**

State the recommended storage conditions (specific temperature, eg: 30°C, humidity, light, etc.).

Information shall include storage condition before first opening, after reconstitution and/or after opening and for all the listed pack types where applicable. Stability data to support such storage condition shall be made available.

### 5.22 Shelf Life

The shelf life for all the listed pack types shall be supported by stability data.

Information shall also include shelf life before first opening, after reconstitution and/or after opening where applicable. Stability data to support such shelf life shall be made available.

Evidence is required to demonstrate that the product is stable (meets the finished product shelf life specifications throughout its proposed shelf-life).

## 5.23 Therapeutic Code (if any)

Select "Health Supplement".

#### SECTION B: PRODUCT FORMULA

Change of formulation for active ingredient or excipient is not allowed during product evaluation.

## 5.24 Batch Manufacturing Formula (BMF)

State the batch size and actual batch manufacturing master formula. Data from validation step will be captured in terms of substance name, type (active ingredient or excipient), function and quantity per unit dose. Other information will need to be entered.

An **attachment** of the Batch Manufacturing Formula documentation must be provided. The documents must be verified by authorized personel.

### **Example of BMF documentation:**

ABC Sdn. Bhd. Batch Manufacturing Formula

**Product Name:** 

Batch Quantity: 1,000,000 capsules

| Name            | Function  | Quantity per capsule | Batch<br>quantity | Overage |
|-----------------|-----------|----------------------|-------------------|---------|
| Pyridoxine HCl  | Active    | _ mg                 | _ kg              | _ %     |
| Cholecalciferol | Active    | _ mg                 | _ kg              | _ %     |
| Glycerin        | Excipient | _ mg                 | _ kg              | None    |
| Gelatin         | Excipient | _ mg                 | _ kg              | None    |
| Purified water  | Excipient | 0 mg *               | _ kg              | None    |
|                 |           | Total: _ mg          | Total: _ kg       |         |

<sup>\*</sup> evaporated, does not exist in final formulation

(Signature)

Post of authorized person

Name of authorized person

Date:

#### SECTION C: PARTICULARS OF PACKING

## 5.25 Packaging

- Maximum pack size allowed for tablets, pills, or capsules is based on daily dosing for a quantity not exceeding six (6) months usage. This does not apply to products in blister or strip packaging (with justification).
- Maximum pack size allowed for products with disease risk reduction claim is for one
   (1) month supply of products unless justified.
- Product with dosage form of soft gel with tail (twist and squeeze) shall come with children proof cap.
- Packaging particulars to the listing of packing as follows;
- C1: pack size and fill details by weight, or volume or quantity;
- C2 : container type
- C3: Barcode/ serial No (optional);
- C4 : recommended distributor's price (optional);
- C5: recommended retail price (optional);

## SECTION D: LABELLING REQUIREMENTS

### 5.26 Product label

The following information shall be present on the label of a product at the outer carton, immediate container or blister/strips:

Refer to specific Appendix for:

- a) <u>Appendix 19</u>: General Labelling Requirements Label (mock-up) for immediate container and outer carton;
- b) <u>Consumer Medication Information Leaflet (RiMUP)</u>
  For health supplement with high claims/ disease risk reduction
- c) <u>Appendix 20</u>: Specific Labelling Requirements

  For specific substances, e.g. alfalfa, arginine, bee pollen, chitosan, Boswellia serrata etc.

Additional Requirements for Labelling:

- Information on the Product Name, and Name and Strength of active ingredient(s) must be printed repeatedly (for blister/ strip).
- Product with dosage form of soft gel with tail (twist and squeeze) shall include the statement 'Under parent supervision' in the label.
- For products containing animal origin(s), add this statement: *This product contains substance(s) from animal origin.*
- For products containing porcine, add this statement: *This product contains animal part(s) (porcine/pig).*

Health supplement products with disease risk reduction claims (high) are encouraged to be dispensed under the supervision of pharmacists or medical practitioners. At such, the label and package insert of health supplement products with disease risk reduction claims (high) shall have the following statement:

"Please consult a doctor/ pharmacist before taking this product".

## 5.27 <u>Standard Labelling for Health Supplements</u>

- Name and Strength of active substances
- RDA (optional)
- Preservative(s) (where present)
- Alcohol (where present)
- Indication
- Dose / Usage Instruction
- Functional Claim (if applicable)
- Warnings (If applicable)
- Storage Condition
- Keep out of reach of children / Jauhkan daripada capaian kanak-kanak





- Pack Size
- Dosage Form

- Name & address of Product Registration Holder
- Name & address of Manufacturer
- Sources (animal origin)
- Source of capsule shell (if applicable)
- Batch Number
- Manufacturing Date
- Expiry Date

| MAL |  |
|-----|--|
|-----|--|

#### Note:

- Product label shall follow the standard labelling for Health Supplement.
- Information stated on the left and right panel is interchangeable.
- All information on the label must be truthful and not misleading to the consumers.
- Batch number, manufacturing date, expiration date can be stated on the label, on top of the cap or bottom of the bottle.
- The front panel must contain the information as above. However, the information on the side panels is interchangeable. Additional cautionary labelling relating to the safety of the product may be imposed.

## **5.28 Prohibited Visual/ Graphics on Label,** as shown in **Table 7** below:

- The label should not contain any statement or visual presentation which, whether directly or by implication, is likely to mislead the consumer about any product.
- The graphics printed on the outer and inner labels have to be standardized to avoid confusion to the customers.

| No. | Issue   | Example  | Note                                      |
|-----|---|--|---|
| 1.  | Marketing strategy  | Example:  "Money back guarantee"  "Buy 1 free 1"  "Backed by RM5 million  product Liability Insurance"             | Such statements are prohibited on labels. |
| 2.  | Usage guide which promotes use of other product(s)                          | Example:  "After consumption of this product (Product A), for better results, it is recommended to take Product B" | Prohibited on product label               |
| 3.  | Consumer testimonial  |  | Prohibited on product label               |
| 4.  | Clinical Trial results or any information on clinical trial done on product | Example: "Clinically Tested" "Randomized Double-Blind Placebo Control Clinical Study"                              | Such statements are prohibited on labels. |
| 5.  | Reference to Hadith/ Al-<br>Quran/ Bible/ Religious<br>books                |  | Prohibited on product label               |
| 6.  | Opinion of prominent figure(s) on product or its active ingredient/content  | Example: Opinion of product/ formulation inventor  | Prohibited on product label               |

| No. | Issue  | Example   | Note   |
|-----|--|---|--|
| 7.  | Label design (graphic and color) similar to labels from another company                        |   | Prohibited on product label  |
| 8.  | Statement on active ingredient origin  | Example: Source from the Mountains of Alps      | Allowed if proven true   |
| 9.  | Introduction of founder/<br>Manufacturer   |   | Prohibited on product label  |
| 10. | Logo with certification  | Example:<br>SIRIM/ ISO / GMP/ HACCP             | Prohibited on product label because certification renewal is on a yearly basis |
| 11. | Name/ Statement/ Logo/<br>registered<br>trademark which does not<br>satisfy the specifications | Example: "Dr. ABC's Formula" "Nothing like it"  | Prohibited on product label  |
| 12. | Special technique used/<br>superiority in ingredients  | Example:<br>Capsule coat                        | Allowed if proven true   |
| 13. | Nutritional claims with analysis certificate attached  | Example:<br>Calorie, Fat, Protein and<br>others | Prohibited on product label  |
| 14. | Graphics or picture of internal organs   | <b>Example:</b> Kidney, Heart, Nerves.          | Prohibited on product label  |
| 15. | Gender symbol (male or female)   | (♀ and/or ♂)                                    | Prohibited on product label  |
| 16. | Indecent photographs/<br>pornography/ graphics/<br>images                                      |   | Prohibited on product label  |

| No. | Issue  | Example   | Note   |
|-----|--|---|--|
| 17. | Graphics which are incoherent with the indication            | Example:  - Noted indication is for constipation, but graphics on label shows a slim-looking lady which denotes indication for weight loss  - Indication for urination but label graphics contains picture of a water hose. | Prohibited on product label  |
| 18. | Highlighting unnecessary body parts                          | Example: Indication is for general health but graphics on label highlights male and female sexual organ parts   | Prohibited on product label  |
| 19. | Graphics of plants or<br>animal which<br>may cause confusion | Example: Radix Ginseng which is improvised as a male sexual part  | Prohibited on product label  |
| 20. | Photograph of celebrities                                    | Example - Artiste, sports person(s), politician   | Prohibited on product label  |
| 21. | Statement on sugars  | Example - This product contains no added sugar  | Allowed on product label provided the product contains no fructose, glucose, sucrose, or other kind of sugars with a potential to affect diabetics are not included in the formulation |
| 22. | Negative statement   | Example - No gluten, yeast etc  | Prohibited on product label  |
| 23. | Other statements   | Example: - This product is blended with premium quality - Certified chemical residue free   | Prohibited on product label  |

| No. | Issue   | Example | Note                        |
|-----|---|---------|-----------------------------|
| 24. | Label design (graphic/colour) similar to/same as an adulterated product |         | Prohibited on product label |

#### Notes:

- 1. The list is not meant to be exhaustive and will be reviewed from time to time.
- 2. The Authority reserves the right to disallow any other words, phrases or graphics for product label, which in its opinion is misleading, improper or not factual.

## 5.29 Package insert (Optional)

The following information is required to be included in a package insert:

- (i) Brand or Product Name
- (ii) Name and Strength of Active Substance(s)
- (iii) Product Description
- (iv) Indication
- (v) Dose/ Use Instruction
- (vi) Contraindications
- (vii) Warnings and Precautions
- (viii) Interactions with Other Medications
- (ix) Statement on usage during pregnancy and lactation
- (x) Adverse Effects/ Undesirable Effects
- (xi) Overdose and Treatment
- (xii) Storage Conditions (may be omitted if the information is stated on the label or outer carton labels)
- (xiii) Dosage Forms and packaging available
- (xiv) Name and Address of manufacturer/ product registration holder
- (xv) Date of Revision of Package Insert

## SECTION E : PARTICULARS OF PRODUCT OWNER, MANUFACTURER, IMPORTER AND OTHER MANUFACTURER(S) INVOLVED AND STORE ADDRESS

## 5.30 Product Owner

Please select whether the product owner is the product holder, manufacturer or both.

If the product owner is neither the product holder nor the manufacturer, please select name and address of the product owner (applicable for imported product only).

Other details such as product owner, manufacturer, repacker, other manufacturer involved in the manufacturing process, store address and importer (if any) are required to be filled. It is mandatory for the repacker to acquire GMP certificate.

## 5.31 <u>Letter of authorization from product owner</u>

This is applicable for imported product in which the product owner appoints the product holder (in Malaysia) as their product holder in Malaysia

## 5.32 Letter of appointment of contract manufacturer and/or repacker

This applies if the product is contract manufactured by a manufacturer who is not the product owner.

## 5.33 Letter of acceptance from contract manufacturer and/or repacker

This applies if the product is contract manufactured by a manufacturer who is not the product owner.

## 5.34 <u>Certificate of Pharmaceutical Product (CPP), Certificate of Free Sales (CFS)</u> <u>and Good Manufacturing Practice (GMP)</u>

CPP can be submitted in replacement of CFS and GMP certificate if the product is classified as a pharmaceutical product in the country of origin:

## 5.35 **GMP/CFS Template**

Authority name, address, country

Type of certificate

Company name (product owner/ manufacturer)
Product name
Product formulation if available
Dosage form

Statement of freely sold (similar meaning) if for CFS certificate Standard of GMP and compliance status if for GMP certificate

**Duration of certification** 

Name, signature and designation of authorized personnel Date of signature

**Note:** The certificate must be in English or translated into English (certified true by issuance or embassy or notary public)

## 5.36 Attachment of Protocol Analysis

Protocol analysis is attached here. (Part of quality of product-Section P: Drug Product)

#### **SECTION P: DRUG PRODUCT**

## 5.37 Manufacturing Process

Provide a brief description of the manufacturing process. Provide essential points of each stage of the manufacturing process and a description of the assembling of the product into final containers. If the product is repacked/assembled by another manufacturer, provide details of repacking/assembly and quality control.

The manufacturing process may be presented in the form of a flowchart.

## 5.38 <u>Control of Critical Steps and Intermediate/In Process Quality Control (IPOC)</u>

Provide a summary of the tests performed, stages at which they are done, and the frequency of sampling and number of samples taken each time. Provide specifications for quality assurance of the product.

## **Example of In Process Quality Control:**

Company Name/ Address:

Applicant/ Client Name/ Address:

Date:

## In-Process Quality Control: Test performed during manufacturing process

| No. | Test Done<br>(example) | Stage Done<br>(example)                  | Frequency<br>of testing<br>(example) | Quantity<br>sample<br>taken<br>(example) | Specifications (example) | Method<br>(example)  |
|-----|------------------------|--|--------------------------------------|--|--------------------------|----------------------|
| 1.  | Appearance             | Before<br>weight, after<br>encapsulation | 2                                    | 10 gram                                  | Blue like<br>orange      | Organoleptic<br>test |
| 2.  | Disintegration         | After compression                        | 2                                    | 10 tablet                                | NMT 30 minutes           | Equipment etc.       |
| 3.  | Uniformity of weight   | After<br>tableting,<br>Packaging         | 4                                    | 20 Tablets                               | 1 gram/tab               |                      |

<sup>\*</sup> Declaration (if any)

Signature (authorized personnel)

Name:

Designation:

<sup>\*</sup> The above parameters are only as an example; other test may be required for specific product.

### **5.39 Finished Product Quality Control**

a) Provide details of quality control specifications, including a list of tests for both release and shelf life specifications (if they are different) and state the limits of acceptance.

## **Example of Finished Product Quality Specification:**

## Finished Product Quality Control (FPQC) - Finished product Specification/ Specification Sheet

Company name/Address:

**Product Name:** 

Batch no.

Dosage form:

Packaging:

Date of manufacture:

Date of expiry:

| No. | Test   | Method                          | Specification                  | Reference  |
|-----|--|---------------------------------|--------------------------------|--|
| 1.  | Appearance/ Organoleptic:<br>Odour<br>Colour                     | Ex: Macroscopic/<br>Microscopic | To describe the characteristic | In-house/<br>pharmacopoeia (e.g.<br>BP/USP etc.) |
| 2.  | Assay:<br>(All active ingredients/<br>compounds claim on label)  | HPLC/ GC/ MS/<br>UV             | To specify                     | To specify                                       |
| 3.  | Disintegration/Dissolution                                       | To specify                      | DRGD                           | DRGD   |
| 4.  | Uniformity of weight   | To specify                      |                                |  |
| 5.  | Water content  | To specify                      |                                |  |
| 6.  | Microbial contamination TAMC, TYMC, specified microorganism      | To specify                      | DRGD                           | DRGD   |
| 7.  | Heavy Metal Contamination:<br>Lead, Arsenic, Cadmium,<br>Mercury | To specify                      | DRGD                           | DRGD   |
| 8.  | Etc.:  |                                 |                                |  |

Signature:

Name:

Designation: (At least by Quality Assurance Manager or equivalent)

Date of signature:

<sup>\*</sup> The above parameters are only as an example; other test may be required for specific product.

### b) Certificate of Analysis of Finished Product

- > The Certificate of Analysis of Finished Product must be complete with the product specification and result. The list of tests and specifications must be same with finished product specification document.
- ➤ Effective from 1 January 2018, two (2) batches of Certificate of Analysis (CoA) of Finished Product must be submitted for new product registration of Health Supplement products with general claim.

(Reference: Directive No. 3, 2017, <u>BPFK/PPP/07/25(8)Jld.1</u>: Direktif Untuk Menguatkuasakan Keperluan Sijil Analisa Produk Siap (Certificate of Analysis (CoA) For Finished Product) Semasa Permohonan Pendaftaran Baru Produk Semulajadi dan Produk Suplemen Kesihatan Dengan General Claims) (15 February 2017)

# **Example of Certificate of Analysis for Finished Product (Health Supplement)**

### Certificate of Analysis

Company name/ Address

Product Name :

Batch no. :

Dosage form :

Packaging :

Date of manufacture

Date of expiry :

| Test Parameter   | Specifications  | Results   | Method |
|--|-----------------|---|--------|
| Appearance/ Organoleptic:  |                 |   |        |
| Odour  | To describe the |   |        |
| Colour   | characteristic  |   |        |
| Disintegration   | DRGD            |   |        |
| Uniformity of weight   |                 |   |        |
| Assay:   |                 |   |        |
| <ul> <li>All active ingredients/<br/>compounds claimed on label</li> </ul> | To specify      |   |        |
| - Active ingredients/ compounds assayed by QBI                             | To specify      | Example: Results and statement 'Not Assayed. Quantified by Input' or words with similar meaning | QBI    |
| Microbial Contamination Test   |                 |   |        |
| TAMC, TYMC, specified  | DRGD            |   |        |
| microorganism  |                 |   |        |
| Heavy Metal Contamination  |                 |   |        |
| Lead (Pb)  | NMT 10 ppm      |   |        |
| Cadmium (Cd)   | NMT 0.3 ppm     |   |        |
| Mercury (Hg)   | NMT 0.5 ppm     |   |        |
| Arsenic (As)   | NMT 5 ppm       |   |        |

NMT = Not More Than

Signature

Name

Designation : (At least by Quality Control Manager or equivalent)

Date of signature :

Note: The above parameter are only as an example, other tests may be required for specific product.

#### c) **Quality Control Test for Health Supplement Product** are:

## 1. Limit Test for Heavy Metals

a) Lead : NMT 10.0 mg/kg or 10.0 mg/litre (10.0ppm)
b) Arsenic : NMT 5.0 mg/kg or 5.0 mg/litre (5.0ppm)
c) Mercury : NMT 0.5 mg/kg or 0.5 mg/litre (0.5ppm)

d) Cadmium: NMT 0.3 mg/kg or 0.3 mg/litre (0.3ppm)

The test shall be conducted on the finished product.

#### 2. Disintegration Test (for tablets, capsules and pills)

### **Disintegration time:**

a) Uncoated tablets
 b) Film-coated tablets
 c) Sugar-coated tablets
 c) Sugar-coated tablets
 c) NMT 30 minutes
 d) NMT 60 minutes

d) Enteric-coated tablets/capsules :

Does not disintegrate for 60 minutes in acid solution but to disintegrate within 60 minutes in buffer solution; OR

Does not disintegrate for 120 minutes in acid solution but to disintegrate within 60 minutes in buffer solution

e) Capsules : NMT 30 minutes f) Pills : NMT 120 minutes

#### 3. Test for Uniformity of Weight (tablets and capsules only)

#### a) Tablet

- For tablet with average weight of 130mg or less: Not more than 2 tablets differ from the average weight by more than 10% AND no tablets differ from the average weight by more than 20%
- For tablet with average weight between 130-324mg: Not more than 2 tablets differ from the average weight by more than 7.5% AND no tablet differs from the average weights by more than 15%
- For tablets with average weight more than 324mg: Not more than 2 tablets differ from the average weight by more than 5% AND no tablet differs from the average weight by more than 10%

#### b) Capsule

Individual weight of the capsule to be within the limit of 90-110% of the average weight.

<sup>\*</sup> Required for products with ingredients from natural sources.

## **4. Tests for Microbial Contamination,** as shown in **Table 8** below:

| Route of Administration   | TAMC<br>(CFU/g or<br>CFU/ml) | TYMC<br>(CFU/g or<br>CFU/ml) | Specified microorganisms  |
|---|------------------------------|------------------------------|---|
| Non-aqueous preparations for oral use   | NMT 2 x 10 <sup>3</sup>      | NMT 2 x 10 <sup>2</sup>      | Absence of <i>Escherichia coli</i> (1 g or 1 ml)  |
| Aqueous preparations for oral use   | NMT 2 x 10 <sup>2</sup>      | NMT 2 x 10 <sup>1</sup>      | Absence of <i>Escherichia coli</i> (1 g or 1 ml)  |
| Special Ph. Eur. provision for oral dosage forms containing raw materials of natural (animal, vegetal or mineral) origin for which antimicrobial pretreatment is not feasible and for which the competent authority | NMT 2 x 10 <sup>4</sup>      | NMT 2 x 10 <sup>2</sup>      | Not more than 10 <sup>2</sup> CFU of biletolerant gram-negative bacteria (1 g or 1 ml or MPN)  Absence of <i>Salmonella</i> (10 g or 10 ml)  Absence of <i>Escherichia coli</i> (1 g or 1 ml) |
| accepts TAMC of the raw material exceeding 10 <sup>3</sup> CFU/g or CFU/mL.   |                              |                              | Absence of <i>Staphylococcus aureus</i> (1 g or 1 ml)   |

#### Notes:

TAMC: Total Aerobic Microbial Count [Not applicable to products containing viable microorganisms as active ingredient (Example: product containing probiotics from bacteria)]

TYMC: Total Yeasts & Moulds Count [(Not applicable to products containing viable microorganisms as active ingredient (Example: product containing probiotics from yeasts)]

NMT : Not more than

[Reference: latest version of British Pharmacopoeia]

### d) Other supporting documents

- For the submission of other supporting documents.
- Additional requirement for safety and quality of active ingredient/ product (e.g., dose for children, pregnant etc.)
- Quality testing for specific ingredient:
  - For product containing Aphanizomenon flos-aquae, applicants would have to provide certificates of analysis showing that the microcystin-LR or total microcystins content of the raw material does not exceed 1µg/g and the finished product has been tested for microcystin-LR using an acceptable method.
  - For products containing probiotics, applicants are required to provide strain specific antibiotic resistance data for each probiotic strain.

- For products containing Red Yeast Rice (Monascus purpureus), applicants shall provide certificates of analysis (for both raw material and finished product) showing the Monacolin-K content. The percentage of Monacolin-K shall not exceed 1% and the Monakolin-K consumed shall not exceed 10 mg per day.
- Quality testing for specific product:
  - Certificate of Analysis for the level of dioxin (PCDDs and PCDFs) and dioxin-like polychlorinated biphenyls (PCBs) is required for product containing ingredient(s) derived from seafood. (The acceptable limit for these tests shall follow standard references such as United States Pharmacopoeia (USP) and European Regulation.)
  - Certificate of Analysis for proof of hormone-free is required for product containing placenta

## 5.40 **Stability Data**

#### General:

- The stability of the product is important to ensure the quality of health supplement product. This is to ensure that the product specifications are maintained throughout the shelf life of product.
- Effective from 27 November 2014, a shelf life of two (2) years shall be approved for both local and imported products. Proposed shelf life exceeding this period will have to be supported by stability study data conducted in Malaysia under Zone IVb conditions (30±2 °C, 75±5%). For further information, refer to circular: Bil.(27).dlm BPFK/PPP/06/04 Ild.7 Tempoh Hayat Simpanan (Shelf-Life) Bagi Produk Tradisional dan Suplemen Kesihatan (27 November 2014).
- The testing frequency of the stability data is as described in **Table 9** below:

| Storage condition | Testing frequency   |  |  |  |  |
|-------------------|---|--|--|--|--|
| Real time         | Time 0, 3, 6, 9, 12, 18, 24 months and annually there after through |  |  |  |  |
| Accelerated       | 0, 3 and 6 months   |  |  |  |  |

Refer to the ASEAN Guidelines on Stability Study and Shelf Life of Health Supplements for further details.

# Storage Conditions with Type of Container Closure System/ Stability Study

## **Table 10:**

| No. | Type of Container Closure System/ Study                    | Storage Condition                      |
|-----|--|--|
| 1.  | Products in primary containers permeable to water vapour   | 30°C <u>+</u> 2°C/75% RH <u>+</u> 5%RH |
| 2.  | Products in primary containers impermeable to water vapour | 30°C <u>+</u> 2°C                      |
| 3.  | Accelerated studies  | 40°C <u>+</u> 2°C/75% RH <u>+</u> 5%RH |

# Reports of stability studies shall provide details of:

- the batches placed under study (a minimum of 2 batches are required).
- containers/ packaging type.
- conditions of storage during study (temperature, humidity, etc).
- duration of study and frequency (interval) of the tests/ observations.
- the tests performed and acceptance limits.

# **Example of Stability Data (Health Supplement)**

### **STABLITY DATA**

**PRODUCT NAME**: TABLET ABC 500MG **BATCH NO**. :

MANUFACTURING DATE:dd/mm/yyTEMPERATURE: $30 \, ^{\circ}\text{C} \pm 2 \, ^{\circ}\text{C}$ EXPIRY DATE:dd/mm/yyRELATIVE HUMIDITY:  $75 \, \% \pm 5\%$ 

| Toota                            | Specification                                |       |          | Fr           | equenc    | y of Te | sting   |        |    |
|----------------------------------|--|-------|----------|--------------|-----------|---------|---------|--------|----|
| Tests                            | Specification                                | 0     | 3        | 6            | 9         | 12      | 18      | 24     | 36 |
| Product description              | Film-coated tablet,                          |       |          |              |           |         |         |        |    |
|                                  | brownish in colour                           |       |          |              |           |         |         |        |    |
| Disintegration test              | NMT 30 minutes                               |       |          |              |           |         |         |        |    |
| Assays                           | eg: 90% -120% (ref)                          |       |          |              |           |         |         |        |    |
| - All active                     |  |       |          |              |           |         |         |        |    |
| ingredients/                     |  |       |          |              |           |         |         |        |    |
| compounds<br>claimed on label    |  |       |          |              |           |         |         |        |    |
| Active ingredients/              | To specify                                   | 'Not  | Assave   | ı<br>ed Ouar | tified h  | v Innuť | or word | s with |    |
| compounds assayed                | 10 specify                                   |       | ilar mea |              | itilica b | y mpac  | or word | 5 WICH |    |
| by QBI                           |  |       |          | J            |           |         |         |        |    |
| Microbial                        |  |       |          |              |           |         |         |        |    |
| Contamination test:              |  |       |          |              |           |         |         |        |    |
| m . 1 A 1 '                      | NIME 2 404                                   |       |          |              |           |         |         |        |    |
| Total Aerobic<br>Microbial Count | NMT 2 x 10 <sup>4</sup>                      |       |          |              |           |         |         |        |    |
| Microbial Count                  |  |       |          |              |           |         |         |        |    |
| Total Yeasts &                   | NMT 2 x 10 <sup>2</sup>                      |       |          |              |           |         |         |        |    |
| Moulds Count                     |  |       |          |              |           |         |         |        |    |
|                                  |  |       |          |              |           |         |         |        |    |
| Test for Specified               | $\rightarrow$ NMT 1 x 10 <sup>2</sup> CFU of |       |          |              |           |         |         |        |    |
| Microorganisms                   | bile-tolerant gram-                          |       |          |              |           |         |         |        |    |
|                                  | negative bacteria in<br>1g or 1ml or MPN     |       |          |              |           |         |         |        |    |
|                                  | Ig of Till of MFN                            |       |          |              |           |         |         |        |    |
|                                  | Absence of                                   |       |          |              |           |         |         |        |    |
|                                  | Salmonella in 10g                            |       |          |              |           |         |         |        |    |
|                                  | or 10ml                                      |       |          |              |           |         |         |        |    |
|                                  |  |       |          |              |           |         |         |        |    |
|                                  | Absence of                                   |       |          |              |           |         |         |        |    |
|                                  | Escherichia coli in                          |       |          |              |           |         |         |        |    |
|                                  | 1g or 1ml                                    |       |          |              |           |         |         |        |    |
|                                  | ➤ Absence of                                 |       |          |              |           |         |         |        |    |
|                                  | Staphylococcus in                            |       |          |              |           |         |         |        |    |
|                                  | 1g or 1 ml                                   |       | <u> </u> |              | <u> </u>  |         |         |        |    |
| Heavy metal test:                |  |       |          |              |           |         |         |        |    |
| Lead                             | ≤10.0 mg/kg (≤ 10ppm)                        |       |          |              |           |         |         |        |    |
| Arsenic                          | ≤5.0 mg/kg (≤ 5ppm)                          |       |          |              |           |         |         |        |    |
| Mercury                          | ≤0.5 mg/kg (≤ 0.5ppm)                        | NA    |          |              |           |         |         |        |    |
| Caumium                          | ≤0.3 mg/kg (≤ 0.3ppm)                        |       |          |              |           |         |         |        |    |
| Cadmium                          | ≤0.3 mg/kg (≤ 0.3ppm)                        | NA NA |          |              |           |         |         |        |    |

Conclusion -----

Analyst name: (signature) Verified by: (signature)

Name:
Designation
Date:

Name:
Designation
Date:

Stability study data checklists are as in **Table 11** below:

| Data Required                 | Remarks   |
|-------------------------------|---|
| Company name                  | - From product holder/ manufacturer/ third party lab  |
| Product name                  | - To be same with other documentation   |
| Dosage form                   | - To be same with A3  |
| Packaging<br>particulars      | - Material and pack size must be stated<br>- To be same with C1   |
| Storage condition             | <ul> <li>Temperature and humidity must be stated</li> <li>Shall comply with ASEAN Zone IV requirement (30±2°C/75±5%RH)</li> <li>If different storage condition (e.g. 25°C, 2-8°C), must provide justification/ supporting data.</li> </ul>  |
| Frequency of testing          | For example: - 0, 3, 6, 9, 12, 18, 24 months and annually for the proposed shelf life   |
| List of relevant<br>tests     | <ul> <li>All tests required for each dosage form shall be conducted, for example:         <ul> <li>Physical appearance changes</li> <li>Disintegration test (if applicable)</li> <li>Chemical Assays for active ingredients (if applicable)</li> <li>Microbial tests</li> </ul> </li> </ul> |
| Specifications                | <ul> <li>Acceptance limit for each test must be stated</li> <li>To be supported by established references (e.g. USP, BP) if available</li> </ul>  |
| Results for each test         | - Must meet the specifications  |
| Approval by authorized person | - Must have the name, post and signature of authorized person   |

Testing Parameters of Stability Study for each type of dosage forms are shown in **Table 12** below:

| Testing Parameters  Dosage Form     | Appearance/<br>organoleptic (odor,<br>color, taste) | Assay*    | Hardness/<br>friability | Disintegration or dissolution rate | Moisture<br>content | Viscosity | Hq        | Microbial content | Granules/Particle<br>Size variation | Re-suspendability |
|-------------------------------------|---|-----------|-------------------------|------------------------------------|---------------------|-----------|-----------|-------------------|-------------------------------------|-------------------|
| Oral powder                         | $\sqrt{}$   | $\sqrt{}$ |                         |                                    | $\sqrt{}$           |           |           | $\sqrt{}$         |                                     |                   |
| Hard capsule                        | $\sqrt{}$   | $\sqrt{}$ |                         | $\sqrt{}$                          | $\sqrt{}$           |           |           | $\sqrt{}$         |                                     |                   |
| Soft capsule                        | $\sqrt{}$   | $\sqrt{}$ |                         | $\sqrt{}$                          |                     |           |           | $\sqrt{}$         |                                     |                   |
| Coated and Uncoated<br>Tablet       | <b>√</b>  | <b>√</b>  | √<br>(uncoated)         | <b>√</b>                           | $\checkmark$        |           |           | $\checkmark$      |                                     |                   |
| Coated and Uncoated Pill/<br>Pellet | $\checkmark$  | $\sqrt{}$ |                         | $\checkmark$                       | $\sqrt{}$           |           |           | $\sqrt{}$         |                                     |                   |
| Suspension                          | $\sqrt{}$   | $\sqrt{}$ |                         |                                    |                     | $\sqrt{}$ | $\sqrt{}$ |                   | $\sqrt{}$                           | $\sqrt{}$         |
| Solution                            | $\sqrt{}$   | $\sqrt{}$ |                         |                                    |                     |           | $\sqrt{}$ | $\sqrt{}$         |                                     |                   |
| Emulsion                            |   |           |                         |                                    |                     | $\sqrt{}$ | $\sqrt{}$ | $\sqrt{}$         |                                     |                   |
| Granules                            |   |           |                         |                                    | $\sqrt{}$           |           |           |                   | $\sqrt{}$                           |                   |

#### \*Notes:

- 1. The list of tests for each product is not intended to be exhaustive, nor is it expected that every listed test to be included in the design of the stability study protocol for a particular finished product.
- \* Assay to determine the stability of a single active ingredient or a single marker/surrogate indicator that is susceptible to change during storage and is likely to influence quality shall be sufficient to infer the overall stability of the TM/HS product irrespective of whether the finished product contains single or multiple active ingredients.
- 2. Justification must be given if one of the tests is not conducted for relevant dosage form.
- 3. Effective from 1 January 2023, Quantification by Input (QBI) of active ingredients may be considered for Traditional Medicine and Health Supplement (TMHS) Products. For details, refer to the "Direktif Berkenaan Pelaksanaan Garis Panduan Guidance on the Acceptance Criteria for Quantification by Input (QBI) of Active Ingredients Claimed on Label of Traditional Medicine and Health Supplement (TMHS) Products." NPRA.600-1/9/13(16) Jld 1. (8 November 2022)

# **SECTION S: DRUG SUBSTANCE**

# 5.41 Specifications and Certificate of Analysis of Active Ingredient

Certificate of analysis for each active ingredient (raw material) is required pre-registration. The certificate must consist of specifications and results of analyses.

### **ATTACHMENT 1**

# CHECKLIST OF DOSSIER REQUIREMENT FOR HEALTH SUPPLEMENTS

- Depending on the level of claims, submission may follow the route outlined:
  - i) General/ Nutritional and Medium Claims Abridged evaluation
  - ii) Disease Risk Reduction Claims Full evaluation

Table 13: Checklist for General/Nutritional and Medium Claim

| No.     | Field   | General or<br>Nutritional<br>Claims | Functional<br>Claims |
|---------|---|-------------------------------------|----------------------|
| Product | Validation (PV)   |                                     |                      |
| DV1     | Brand Name  | ./                                  | . [                  |
| PVI     | Full Product Name   |                                     | V                    |
|         | Dosage Form   |                                     |                      |
| DVO     | - COA capsule shell is required   | ſ                                   | ſ                    |
| PV2     | - Colouring agent used in capsule   | V                                   | V                    |
|         | - Letter to verify the source of gelatin used   |                                     |                      |
| PV3     | List of Active ingredient(s)  | $\sqrt{}$                           | $\sqrt{}$            |
| PV4     | List of excipient (s)   |                                     |                      |
| PV5-17  | Other information (e.g., Manufacturer, premix etc., where applicable)   | $\sqrt{}$                           | $\sqrt{}$            |
| Part 1  |   |                                     |                      |
|         | Product Description   |                                     |                      |
| A4      | - Describe visual and physical characteristics of the product including shape, size, superficial markings, colour, odour, taste, type of coating, type of capsule etc. where applicable | $\checkmark$                        | √                    |
|         | - Animal shape is only allowed for 'For Export Only' (FEO) Products   |                                     |                      |
| A7      | Product indication/ Usage   |                                     | $\sqrt{}$            |
|         | Dose/ Use Instruction   |                                     |                      |
|         | - Target population (e.g., Adults)  |                                     |                      |
| A8      | - Quantity and frequency  | $\sqrt{}$                           | $\sqrt{}$            |
|         | - Dosing schedule must be stated (e.g. take before/ after/ with meal)   |                                     |                      |
| A10     | Contraindication, if applicable   | $\sqrt{}$                           | $\sqrt{}$            |
| A11     | Warning/ Precautions, if applicable   | $\sqrt{}$                           | V                    |

| No.  | Field   | General or<br>Nutritional<br>Claims | Functional<br>Claims |  |
|------|---|-------------------------------------|----------------------|--|
| A12  | Drug Interaction, if applicable   | $\sqrt{}$                           | $\sqrt{}$            |  |
| A14  | Side Effects/ Adverse Reactions, if applicable  | $\sqrt{}$                           | $\sqrt{}$            |  |
| A15  | Signs and Symptoms of overdose and treatment, if applicable   | $\sqrt{}$                           | V                    |  |
| A19  | Storage Condition   |                                     |                      |  |
| 1117 | - According to stability data   | <b>,</b>                            | <b>,</b>             |  |
|      | Shelf life  |                                     | _                    |  |
| A20  | <ul><li>Must be supported by stability study</li><li>Please refer subsection 5.40</li></ul>   | V                                   | V                    |  |
| B1.1 | Batch Size  | $\sqrt{}$                           | $\sqrt{}$            |  |
| B1.2 | Batch Formula   | $\sqrt{}$                           |                      |  |
|      | Attachment of Batch Manufacturing Formula   |                                     |                      |  |
| B2   | - Shall be on the product owner's/ manufacturer's original letterhead, product details, date and signature & designation of authorized personnel  |                                     | V                    |  |
|      | Pack Sizes  | $\sqrt{}$                           | $\sqrt{}$            |  |
| С    | - Material and colour used for primary and secondary packing should be stated   | $\sqrt{}$                           | $\sqrt{}$            |  |
| D1   | Label for immediate container   | $\sqrt{}$                           | $\sqrt{}$            |  |
| D2   | Label for outer carton (if applicable)  |                                     | V                    |  |
| D3   | Proposed package insert / Product information leaflet (if applicable)   | √                                   | √                    |  |
|      | Company name and address of product owner   | V                                   |                      |  |
| E1   | Letter of authorization from product owner to product registration holder (if applicable)   | $\checkmark$                        | V                    |  |
| E2   | Letter of Appointment of Contract Manufacturer/ Repacker from Product Owner  E2 (if applicable)   |                                     | $\sqrt{}$            |  |
|      | Letter of Acceptance from Contract<br>Manufacturer/ Repacker (if applicable)  | $\sqrt{}$                           | V                    |  |
| Е3   | Certificate of Pharmaceutical Product (CPP) - Applicable to imported products, must be issued by the competent authority in the country of origin. CPP issued by reference country may be considered. |                                     | $\sqrt{}$            |  |

| No. | Field  | General or<br>Nutritional<br>Claims   | Functional<br>Claims |
|-----|--|---|----------------------|
| E4  | <ul><li>Certificate of Free Sale (CFS)</li><li>Applicable if CPP is not available, must be issued by the competent authority in the country of origin/ products owner country.</li></ul> | V   |                      |
| E5  | <ul><li>Certificate of Good Manufacturing Practice (GMP)</li><li>Applicable if CPP is not available, must be issued by the competent authority in the manufacturing country.</li></ul>   | V   | V                    |
| E6  | Company name and address of manufacturer   | $\sqrt{}$   | $\sqrt{}$            |
| E7  | Company name and address of other manufacturer (if applicable)   | √   | $\sqrt{}$            |
| E8  | Importer(s)  | √   | $\sqrt{}$            |
| Е9  | Store address(s)   | $\sqrt{}$   | $\sqrt{}$            |
| E12 | Attachment of protocol analysis  | √     - dosage form     extended/     sustained-     release/     timed-     release     dosage form      * LOC to     submit during     post     registration for     other types of     dosage form |                      |
|     | Examples of supporting documents   |   | _                    |
| E14 | Dioxin level test results (for product containing ingredients derived from seafood)  Certificate of Good Manufacturing Practice  |   | √                    |
|     | (GMP) for premixed active ingredients  Hormone free test results (for placenta products)   |   |                      |

| No.              | Field   | General or<br>Nutritional<br>Claims                 | Functional<br>Claims |
|------------------|---|---|----------------------|
|                  | Declaration letter from product manufacturer on the hormone - free status for product containing placenta |   |                      |
|                  | Manufacturing process validation report if applicable   |   |                      |
|                  | Letter of commitment if applicable  |   |                      |
|                  | Etc.  |   |                      |
| Part II Se       | ection P  |   |                      |
| P3.2             | Manufacturing Process   |   | $\sqrt{}$            |
| P3.2.1           | Attachment of Manufacturing Process  Document or Manufacturing Flow Diagram                               | $\sqrt{}$   | $\sqrt{}$            |
| P3.3             | In-Process Quality Control (IPQC)   | √ *LOC to submit data during post registration      | $\checkmark$         |
| P5.1             | Finished Product Specification (FPQC)   | √  * LOC to  submit data  during post  registration |                      |
| P5.4.1           | Attachment of Certificate of finished product (COA of finished product)                                   |   | $\sqrt{}$            |
| P8               | Stability Data  | √ ***Please refer subsection 5.40)                  | V                    |
| Part II Se       | ection S  |   |                      |
| S4.1 &<br>S4.4.1 | Attachment of Specifications and Certificate of Analysis (COA) of Active Ingredient                       | $\sqrt{}$   | $\sqrt{}$            |

<sup>\*</sup> Complete stability study conducted at  $30 \pm 2$   $^{\circ}$ C / RH 75  $\pm$  5%, IPQC, FPQC, protocol analysis and COA of finished product are required to be submitted 2 years after product registration with SAMPLE of the products. Failure on submission will cause the product be suspended until the complete documents are submitted, the registration of the product will be terminated if the complete documents still cannot be produced upon renewal of product registration.

• Dossier Requirement for Disease Risk Reduction as in **Table 13** above and **Table 14** below:

Table 14: Additional Quality Data Checklist for Disease Risk Reduction Claim

| No.  |      |                  | Field                                       | Disease Risk Reduction<br>Claim |
|------|------|------------------|---|---------------------------------|
| DADE |      | TTE AT           | THE CHAPTE TWENTE DD O DIVOT                |                                 |
| PART | P.   |                  | TH SUPPLEMENT PRODUCT                       |                                 |
| P    | P1.  |                  | ption and Composition                       |                                 |
|      | P2.  |                  | naceutical Development                      |                                 |
|      |      | P2.1             | Information on Development Studies          |                                 |
|      |      | P2.2             |   |                                 |
|      |      | PZ.Z             | Components of the Health Supplement Product |                                 |
|      |      | P2.3             | Finished Product                            |                                 |
|      |      | P2.3<br>P2.4     |   |                                 |
|      |      | P2. <del>4</del> | Manufacturing Process                       | V                               |
|      |      | P2.5             | Development<br>Container Closure System     |                                 |
|      |      | P2.5<br>P2.6     | -   |                                 |
|      |      | P2.0<br>P2.7     | Microbiological Attributes Compatibility    |                                 |
|      | P3.  |                  | acturer                                     |                                 |
|      | r3.  |                  | Batch Manufacturing Formula                 |                                 |
|      |      | P3.1<br>P3.2     |   |                                 |
|      |      | F 3.2            | Manufacturing Process & Process Control     |                                 |
|      |      | D2 2 1           |   |                                 |
|      |      | F 3.2.1          | Manufacturing Process Flowchart             |                                 |
|      |      | P3.3             |   |                                 |
|      |      | r 3.3            | Intermediates                               |                                 |
|      |      | P3.4             | Process Validation and                      |                                 |
|      |      | 13.4             | Evaluation                                  |                                 |
|      | P4.  | Contro           | ol of Excipients                            |                                 |
|      | 1 7. | P4.1             | Specifications                              |                                 |
|      |      | P4.2             | Analytical Procedure                        |                                 |
|      |      | P4.3             | Validation of Analytical                    |                                 |
|      |      | 1 1.5            | Procedures                                  |                                 |
|      |      | P4.4             | Justification of Specification              |                                 |
|      |      | P4.5             | Excipient of Human or Animal                |                                 |
|      |      | 1 1.0            | Origin                                      |                                 |
|      |      | P4.6             | Novel Excipients                            |                                 |
|      | P5.  |                  | ol of Finished Product                      |                                 |
|      |      | P5.1             | Specification                               |                                 |
|      |      | P5.2             | Analytical Procedures                       |                                 |
|      |      | P5.3             | Validation of Analytical                    |                                 |
|      |      | - 3.0            | Procedures                                  |                                 |
|      |      | P5.4             | Batch Analyses                              |                                 |
|      |      | P5.5             | Characterization of impurities              |                                 |
|      |      | P5.6             | Justification of Specification              |                                 |
|      | P6.  |                  | ence Standards or Materials                 |                                 |

| No.    |     | Field                                 | Disease Risk Reduction<br>Claim |
|--------|-----|---------------------------------------|---------------------------------|
|        | P7. | Container Closure System              |                                 |
|        | P8. | <u>Stability</u>                      |                                 |
|        | P9. | Product Interchangeability/Equivalent |                                 |
|        |     | <u>evidence</u>                       |                                 |
| PART S | S.  | HEALTH SUPPLEMENT                     |                                 |
|        |     | SUBSTANCE                             |                                 |
|        | S1. | General Information                   |                                 |
|        |     | S1.1 Nomenclature                     |                                 |
|        |     | S1.2 Structure                        |                                 |
|        |     | S1.3 General Properties               |                                 |
|        | S2. | <u>Manufacture</u>                    | $\sqrt{}$                       |
|        | S3. | <u>Characterisation</u>               |                                 |
|        | S4. | Control of Health Supplement          |                                 |
|        |     | <u>Substance</u>                      |                                 |
|        |     | S4.1 Specification                    |                                 |
|        |     | S4.2 Analytical Procedures            |                                 |
|        |     | S4.3 Validation of Analytical         |                                 |
|        |     | Procedure                             |                                 |
|        |     | S4.4 Batch Analysis                   |                                 |
|        |     | S4.5 Justification of Specification   |                                 |
|        | S5. | Reference Standards or Materials      |                                 |
|        | S6. | Container Closure System              |                                 |
|        | S7. | <u>Stability</u>                      |                                 |
|        |     |                                       |                                 |

# PART III: NON-CLINICAL DATA

- Applicable to disease risk reduction claims
(For new active ingredient, new combination of active ingredients and new dose)

# **Table 15:**

| No. | Field  | Disease Risk Reduction Claims |
|-----|--|-------------------------------|
|     | Overview of non-clinical testing strategy      |                               |
| 1.  | - nomenclature                                 |                               |
| 1.  | - structure                                    | V                             |
|     | - general properties                           |                               |
|     | Pharmacology                                   |                               |
| 2.  | - related information (including academic      | 1                             |
| ۷.  | literature) of pharmacology studies on the     | V                             |
|     | declared efficacy                              |                               |
|     | Pharmacokinetics                               |                               |
| 3.  | - related information (including academic      |                               |
| J.  | literature) of pharmacokinetics studies on the | v                             |
|     | declared efficacy                              |                               |
|     | Toxicology                                     | -                             |
| 4.  | - related information (including academic      |                               |
|     | literature) of toxicology studies              |                               |
| 5.  | Integrated overview and conclusions            |                               |
| 6.  | Other toxicity studies if available            | V                             |
| 7.  | References                                     | ./                            |
| ٧.  | - List of references used                      | V                             |

- All information must be provided in the following format/ table:

| Study | Туре        | Product       | Study Summary   | Summary findings  |
|-------|-------------|---------------|---|---|
| Title | of<br>Study | (formulation) | - Study Design (e.g. case control, randomised placebo controlled, in        | (Includes scientific details such as strength of evidence [e.g. p-values], conclusions, |
|       |             |               | vitro data, cohort study) - Dosage  | any shortcomings, etc.  |
|       |             |               | <ul><li>Subject</li><li>Study Duration</li><li>Outcome parameters</li></ul> | For traditional evidence include enough information to demonstrate relevance)           |

## **PART IV: CLINICAL DOCUMENTS**

- Applicable to disease risk reduction claims (for new active ingredient, new combination of active ingredients and new dose).

# **Table 16:**

| No. | Field                                      | Disease Risk Reduction Claims |
|-----|--|-------------------------------|
| 1.  | Clinical overview                          | $\sqrt{}$                     |
| 2.  | Production Development Rational            | $\sqrt{}$                     |
| 3.  | Overview of Biopharmaceutics               | ./                            |
| 3.  | - To include associated analytical methods | V                             |
| 4.  | Overview of Clinical Pharmacology          | ./                            |
| 4.  | - Summary of clinical pharmacology studies | V                             |
| 5.  | Overview of Efficiency                     | 1                             |
| 3.  | - Summary of clinical efficacy             | V                             |
| 6.  | Overview of Safety                         | ./                            |
| 0.  | - Summary of clinical safety               | V                             |
|     | References                                 |                               |
| 7   | - List of all clinical studies             |                               |
| 7.  | - List of key literature references        | V                             |
|     | - Published clinical papers                |                               |

- All information must be provided in the following format/table:

| Forms of study | Sample size       | Duration      | Randomisation of groups | Endpoint       | Statistical analysis of data |
|----------------|-------------------|---------------|-------------------------|----------------|------------------------------|
| Randomised,    | Must be justified | Must be       | All groups shall        | As a           | Methods to calculate         |
| controlled,    | and must          | justified and | have                    | decrease       | the sample size,             |
| and            | involve           | must be of    | comparable              | incidence of   | setting the power and        |
| preferably     | sufficiently      | sufficient    | baseline values,        | the disease    | the significance level       |
| blinded        | large number of   | duration to   | particularly for        | or a           | at conventional 80%          |
| intervention   | subjects to       | ensure no     | those factors           | reduction of   | and p<0.05                   |
| studies        | estimate          | safety        | that are known          | a factor, or a | respectively shall be        |
|                | incidence and     | concerns      | to be, or may           | surrogate      | utilised                     |
|                | nature of         | with respect  | be,                     | thereof, of    |                              |
|                | potential         | to long term  | confounders or          | the many       | Meta-analysis shall          |
|                | adverse           | use           | risk factors            | that           | combine only studies         |
|                | reactions         |               |                         | contribute to  | with similar design,         |
|                |                   |               |                         | the            | populations,                 |
|                |                   |               |                         | development    | interventions and            |
|                |                   |               |                         | of a disease   | outcome measure              |

## **ATTACHMENT 2**

Table 17: Allowable claims for specific active ingredients in HS products

| Ingredients  | Claims                              |  |                                 |  |
|--|-------------------------------------|--|---------------------------------|--|
| ingreatenes  | General                             | Functional   | Reduced Risk<br>Reduction Claim |  |
| Alpha <sub>s1</sub> -Casein Tryptic<br>Hydrolysate<br>(Milk Protein Hydrolysate) | Helps in maintenance of good health | <ul> <li>Promotes/<br/>Improves sleep<br/>quality</li> <li>Promotes<br/>relaxation</li> </ul>  |                                 |  |
| Beta Carotene  | Maintenance of<br>good health       | Helps in     maintenance of     growth, vision and     tissue     differentiation  |                                 |  |
| Biotin   | Helps in maintenance of good health | Helps to<br>metabolize fats<br>and carbohydrates   |                                 |  |
| Calcium  | Helps in maintenance of good health | <ul> <li>Helps in the formation and maintenance of bones and teeth</li> <li>Claim for specific subgroup:         <ul> <li>Additional calcium is required for pregnant and lactating women, when diet does not provide a sufficient daily intake to help in proper bone formation in developing baby</li> </ul> </li> </ul> |                                 |  |

| Ingredients                    | Claims                                 |  |                                 |  |
|--------------------------------|--|--|---------------------------------|--|
| ingi culculo                   | General                                | Functional   | Reduced Risk<br>Reduction Claim |  |
| Chondroitin Sulphate           | Helps in maintenance of good health    | Promotes healthy joint   |                                 |  |
| Citicoline                     | Helps in maintenance of good health    | Helps to support healthy cognition   |                                 |  |
| Coenzyme Q10                   | Helps in maintenance of good health    | Supports heart<br>health   |                                 |  |
| Collagen Hydrolysate           | Helps in maintenance of good health    | Promotes healthy joints  |                                 |  |
| Copper                         | A factor in maintenance of good health | Helps in the formation of red blood cell   |                                 |  |
| Docosahexaenoic acid<br>(DHA)  | Helps in maintenance of good health    | <ul> <li>Supports heart health</li> <li>Supports brain health</li> <li>Helps to maintain healthy level of triglycerides</li> <li>Supports eye health</li> <li>For fetal brain and eye development</li> </ul> |                                 |  |
| Eicosapentaenoic acid<br>(EPA) | Helps in maintenance of good health    | <ul> <li>Supports heart health</li> <li>Supports brain health</li> <li>Helps to maintain healthy level of triglycerides</li> </ul>   |                                 |  |
| Fish Oil                       | Helps in maintenance of good health    | Supports joint health  |                                 |  |

| Ingredients            |   | Claims  |  |
|------------------------|---|---|--|
|                        | General                                   | Functional  | Reduced Risk<br>Reduction Claim  |
| Folic Acid             | Helps in maintenance of good health       | <ul> <li>Helps in formation of red blood cell</li> <li>For fetal development</li> </ul> | Helps     prevent     neural tube     defects for     women who     are planning     a pregnancy     before     conception     and during     12 weeks of     pregnancy at     a dose of 400     mcg daily |
| Fructooligosaccharides | Helps in maintenance of good health       | Promotes the growth of good bacteria living inside the gut                              |  |
| Hovenia dulcis Fruit   | Helps in<br>maintenance of<br>good health | For maintenance of good liver health  |  |
| Hyaluronic Acid        | Helps in<br>maintenance of<br>good health | Maintains healthy<br>skin   |  |
| Iodine                 | Helps in maintenance of good health       | Helps in the function of the thyroid glands   |  |
| Iron                   | Helps in maintenance of good health       | Helps in the formation of red blood cell  | <ul> <li>Helps to         prevent iron         anemia</li> <li>Helps to         prevent         anemia due         to iron         deficiency</li> </ul>   |
| L-Carnitine            | Helps in maintenance of good health       | Helps to aid fat metabolism   |  |

| Ingredients                                |  | Claims   |                                 |
|--|--|--|---------------------------------|
| ingreuienes                                | General                                      | Functional   | Reduced Risk<br>Reduction Claim |
| Lutein                                     | Helps in maintenance of good health          | Supports eye<br>health   |                                 |
| Magnesium                                  | Helps in maintenance of good health          | Helps the body to<br>metabolize<br>carbohydrate  |                                 |
| Manganese                                  | A factor in<br>maintenance of<br>good health | Helps to     metabolize     carbohydrates and     proteins   |                                 |
| Mixed Tocotrienols                         | Helps in<br>maintenance of<br>good health    | Supports brain health  |                                 |
| Monascus purpureus<br>(Red yeast rice)     | Helps in maintenance of good health          | Helps maintain<br>healthy cholesterol<br>levels  |                                 |
| Phosphorus                                 | Helps in maintenance of good health          | Helps in the formation and maintenance of bones and teeth  |                                 |
| Probiotics                                 | Helps in maintenance of good health          | <ul> <li>Helps to improve a beneficial intestinal microflora</li> <li>Helps support gastrointestinal health</li> </ul> |                                 |
| Vaccinium macrocarpon<br>(Cranberry) Fruit | Helps in maintenance of good health          | Supports healthy<br>urinary tract  |                                 |

| Ingredients                |  | Claims  |                                 |
|----------------------------|--|---|---------------------------------|
| ingreuients                | General                                      | Functional  | Reduced Risk<br>Reduction Claim |
| Vitamin A                  | Maintenance of<br>good health                | <ul> <li>Helps to maintain growth, vision and tissue development</li> <li>Aids in maintaining the health of the skin and mucous membrane</li> <li>Aids in maintenance of eye health</li> </ul>  |                                 |
| Vitamin B1<br>(Thiamine)   | Helps to     maintain good     health        | Helps in maintenance of growth, vision and tissue differentiation   |                                 |
| Vitamin B2<br>(Riboflavin) | A factor in<br>maintenance of<br>good health | <ul> <li>Helps the body to utilize energy from food/metabolize protein, fats and carbohydrates</li> <li>Claim for specific population subgroups:         <ul> <li>Additional amounts of Riboflavin are required during pregnancy and breast feeding when diet does not provide a sufficient daily intake</li> </ul> </li> </ul> |                                 |

| Ingredients                       |  | Claims  |                                 |
|-----------------------------------|--|---|---------------------------------|
|                                   | General                                      | Functional  | Reduced Risk<br>Reduction Claim |
| Vitamin B3<br>(Niacin)            | A factor in<br>maintenance of<br>good health | <ul> <li>Helps normal growth and development</li> <li>Helps the body in utilization of energy from food</li> </ul>  |                                 |
| Vitamin B5<br>(Panthothenic Acid) | Helps in maintenance of good health          | Helps to     metabolize fats     and carbohydrates  |                                 |
| Vitamin B6<br>(Pyridoxine)        | A factor in<br>maintenance of<br>good health | Helps the body to<br>metabolize<br>proteins, fats and<br>carbohydrates  |                                 |
| Vitamin B12<br>(Cyanocobalamine)  | Helps in maintenance of good health          | Helps in the formation of red blood cell  |                                 |
| Vitamin C                         | Helps in maintenance of good health          | <ul> <li>For healthy bones,<br/>(cartilage), teeth,<br/>gums as well as<br/>general make-up<br/>of the body</li> <li>Supports in<br/>immune health</li> </ul>   |                                 |
| Vitamin D                         | Maintenance of good health                   | <ul> <li>Helps in normal development and maintenance of bones and teeth</li> <li>Helps the body utilize calcium and phosphorus</li> <li>Claim for specific population subgroups: Elderly people who are confined indoors</li> </ul> |                                 |

| Ingredients | Claims                                       |   |                                 |  |
|-------------|--|---|---------------------------------|--|
|             | General                                      | Functional  | Reduced Risk<br>Reduction Claim |  |
| Vitamin E   | Maintenance of good health                   |   |                                 |  |
| Vitamin K   | Helps in maintenance of good health          | Support healthy<br>bones  |                                 |  |
| Zeaxanthin  | Helps in maintenance of good health          | Support eye health  |                                 |  |
| Zinc        | A factor in<br>maintenance of<br>good health | Helps to     metabolize     carbohydrates,     fats and protein |                                 |  |

#### Notes:

- 1. The claims listed above will serve as a guide for the applicant. Other wording that bring similar meaning may be considered
- 2. This list is not meant to be exhaustive and will be reviewed from time to time.
- 3. The Authority will nonetheless conduct a detailed evaluation of the evidence included in the report to ensure that the health claim is substantiated.
- 4. The Authority will be willing to consider review other than the listed above if the standards of evidence are consistent with those of the Authority.
- 5. All references must be current.