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.

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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 https://www.npra.gov.my/ using Product Search.

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

No.	Product		Product Category	Route of Evaluation	Condition on Product Indication	Remark
		As single active ingredient	ОТС	Full evaluation	As adjuvant therapy for osteoarthritis	Products containing glucosamine in combination with
1.	Products containing Glucosamine	As combination with Chondroitin and/ or MSM	OTC	Full evaluation	As adjuvant therapy for osteoarthritis	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 containing Chondroitin	As single ingredient OR In combination with other supplement ingredients	Health supplement	Abridged Evaluation	No therapeutic claims are allowed	-
3.	Products containing MSM	As single ingredient OR In combination	Health supplement	Abridged Evaluation	No therapeutic claims are allowed	-

No.	Product	Product Category	Route of Evaluation	Condition on Product Indication	Remark
	with other supplemen ingredients	-			
	As combination with Chondroitin	supplement	Abridged Evaluation	No therapeutic claims are 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) ¹	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 ²	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: Gell	ble 1: General or Nutritional Claims					
Level of claim	Definition	Examples/ Wording of claim	Criteria	Evidence to substantiate HS claims		
General or	■General Health	■Supports	Is in line with	1 or more of the		
Nutritional	Maintenance	healthy growth	established nutrition	following evidences:		
Claims		and	knowledge in			
	■Benefits derived	development	reference texts	i) Standard reference		
	from			e.g. reference		
	supplementation	■Nourishes the	Is related to general	textbooks,		
	beyond normal dietary intake	body	well-being in line with scientific knowledge	pharmacopoeia, monographs		
	J	■Relieves	Ü	ii) Recommendations		
		general	 Claim does not refer to 	on usage from		
		tiredness,	the structure and/or	reference		
		weakness	function of the human	regulatory		
			body	authorities or		
		■Helps to		reference		
		maintain good	In accordance to HS	organisations		
		health	principles and practice in Malaysia			
		For energy and vitality				
		■For strengthening 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/ Wording of claims	Criteria	Evidence to substantiate HS Claims
Functional Claims (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 HS claim	Definition	Examples/ Wording of claims	Criteria	Evidence to substantiate HS Claims
Disease risk reduction	Significantly altering or reducing a risk factor of a disease or health related condition.	 Helps to reduce risk of osteoporosis by strengthening bone Helps to reduce the risk of dyslipidaemia 	 The relationship between the HS ingredient or product and disease risk reduction is supported by consistent scientific evidence Documented in authoritative reference texts Recognised by the Authority reference or international organisations or regulatory authorities Adheres to the key principles of HS claims 	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

Indication	Product/	Dosage and	Duration	Type of	Study	Study	Summary	Limitations	Sour	ce of evidence
/ claim	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,)

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 (https://ods.od.nih.gov/factsheets/list-all/)

Organisations

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

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	Diabetes, Asthma, Cancer
	(revised 1983)	
2.	Prohibited use of a single active ingredient as a	If the product contain Vitamin C,
	product name in products containing more than one active ingredient unless product name	Vitamin E and Fish Oil
	contains words such as 'Plus, Compound, Complex, Herbanika	Product name: "Vitamin C" is not allowed but product name: "Vitamin C Plus" is allowed.
3.	Prohibited use of superlative	Power, Superior, Pure, Mustajab, Safe,
	Names that indicates superiority or inefficacy	Healthy, Penawar, VIP, Good, World 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, 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) <u>Liquid</u>

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 Use of Protected/Endangered Ingredients

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 (http://www.wildlife.gov.my).

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.

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	 Information shall be provided from the competent authorities of reference countries (Refer to 9.6.5) Example of supporting documents: Registration status and maximum registered dosage as health supplement established monograph GRAS status
3.	Clinical studies or scientific evidences	
4.	Non-clinical studies to support long term-use	Full published articlesUnpublished data may be considered
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 Traditional Medicine and Health Supplement latest edition. 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 Traditional Medicine and Health Supplement latest edition 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 Contraindication

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 <u>Drug Interactions</u>

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 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	

^{*} 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>: <u>Specific Labelling Requirements</u>
 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).*
- For small label, the labelling requirements may follow that of blister packaging subject to satisfactory justification.
 - * Definition of small label: Small label refers to the label on a small primary (immediate) container, where the container is not large enough to accommodate an immediate label that includes all the information and formatting typically required.
- 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 Standard Labelling for Health Supplements

- 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 for immediate container, outer carton, package insert or Consumer Medication Information Leaflet.
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- Quran/ Bible/ Religious 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/ Manufacturer		Prohibited on product label
10.	Logo with certification	Example: SIRIM/ ISO / GMP/ HACCP	Prohibited on product label because certification renewal is on a yearly basis
11.	Name/ Statement/ Logo/ registered trademark which does not satisfy the specifications	Example: "Dr. ABC's Formula" "Nothing like it"	Prohibited on product label
12.	Special technique used/ superiority in ingredients	Example: Capsule coat	Allowed if proven true
13.	Nutritional claims with analysis certificate attached	Example: Calorie, Fat, Protein and others	Prohibited on product label
14.	Graphics or picture of internal organs	Example: Kidney, Heart, Nerves.	Prohibited on product label
15.	Gender symbol (male or female)	(♀ and/or ♂)	Prohibited on product label
16.	Indecent photographs/ pornography/ graphics/ 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 animal which 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 (example)	Stage Done (example)	Frequency of testing (example)	Quantity sample taken (example)	Specifications (example)	Method (example)
1.	Appearance	Before weight, after encapsulation	2	10 gram	Blue like orange	Organoleptic test
2.	Disintegration	After compression	2	10 tablet	NMT 30 minutes	Equipment etc.
3.	Uniformity of weight	After tableting, Packaging	4	20 Tablets	1 gram/tab	

^{*} Declaration (if any)

Signature (authorized personnel)

Name:

Designation:

^{*} 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: Odour Colour	Ex: Macroscopic/ Microscopic	To describe the characteristic	In-house/ pharmacopoeia (e.g. BP/USP etc.)
2.	Assay: (All active ingredients/ compounds claim on label)	HPLC/ GC/ MS/ 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: Lead, Arsenic, Cadmium, Mercury	To specify	DRGD	DRGD
8.	Etc.:			

Signature:

Name:

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

Date of signature:

^{*} 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)]ld.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:			
 All active ingredients/ compounds claimed on label 	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.

^{*} Required for products with ingredients from natural sources.

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

Route of Administration	TAMC (CFU/g or CFU/ml)	TYMC (CFU/g or CFU/ml)	Specified microorganisms
Non-aqueous preparations for oral use	NMT 2 x 10 ³	NMT 2 x 10 ²	Absence of <i>Escherichia coli</i> (1 g or 1 ml)
Aqueous preparations for oral use	NMT 2 x 10 ²	NMT 2 x 10 ¹	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 accepts TAMC of the raw material exceeding 10 ³ CFU/g or CFU/mL.	NMT 2 x 10 ⁴	NMT 2 x 10 ²	Not more than 10 ² CFU of biletolerant gram-negative bacteria (1 g or 1 ml or MPN) Absence of Salmonella (10 g or 10 ml) Absence of Escherichia coli (1 g or 1 ml) Absence of Staphylococcus aureus (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 Jld.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: $75 \,^{\circ}\text{M} \pm 5 \,^{\circ}$

Tests Specification Frequency of Testing			sting						
	•	0	3	6	9	12	18	24	36
Product description	Film-coated tablet, brownish in colour								
Disintegration test	NMT 30 minutes								
Assays - All active ingredients/ compounds claimed on label	eg: 90% -120% (ref)								
Active ingredients/ compounds assayed by QBI	To specify		: Assaye ilar mea		ntified b	y Input'	or word	s with	
Microbial Contamination test:									
Total Aerobic Microbial Count	NMT 2 x 10 ⁴								
Total Yeasts & Moulds Count	NMT 2 x 10 ²								
Test for Specified Microorganisms	NMT 1 x 10 ² CFU of bile-tolerant gram- negative bacteria in 1g or 1ml or MPN								
	Absence of Salmonella in 10g or 10ml								
	Absence of Escherichia coli in 1g or 1ml								
	Absence of Staphylococcus in 1g or 1 ml								
Heavy metal test: Lead Arsenic Mercury Cadmium	≤10.0 mg/kg (≤ 10ppm) ≤5.0 mg/kg (≤ 5ppm) ≤0.5 mg/kg (≤ 0.5ppm) ≤0.3 mg/kg (≤ 0.3ppm)					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 particulars	- Material and pack size must be stated - To be same with C1
Storage condition	 Temperature and humidity must be stated Shall comply with ASEAN Zone IV requirement (30±2°C/75±5%RH) If different storage condition (e.g. 25°C, 2-8°C), must provide justification/ supporting data.
Frequency of testing	For example: - 0, 3, 6, 9, 12, 18, 24 months and annually for the proposed shelf life
List of relevant tests	 All tests required for each dosage form shall be conducted, for example: Physical appearance changes Disintegration test (if applicable) Chemical Assays for active ingredients (if applicable) Microbial tests
Specifications	 Acceptance limit for each test must be stated To be supported by established references (e.g. USP, BP) if available
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/ organoleptic (odor, color, taste)	Assay*	Hardness/ friability	Disintegration or dissolution rate	Moisture content	Viscosity	Нф	Microbial content	Granules/ Particle Size variation	Re-suspendability
Oral powder	$\sqrt{}$	$\sqrt{}$			$\sqrt{}$			$\sqrt{}$		
Hard capsule	\checkmark	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$			\checkmark		
Soft capsule	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				$\sqrt{}$		
Coated and Uncoated Tablet	√	√	√ (uncoated)	\checkmark	\checkmark			\checkmark		
Coated and Uncoated Pill/ Pellet	√	\checkmark		\checkmark	\checkmark			~		
Suspension	√					$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
Solution	$\sqrt{}$							$\sqrt{}$		
Emulsion	$\sqrt{}$					$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
Granules	$\sqrt{}$	$\sqrt{}$						$\sqrt{}$	$\sqrt{}$	

*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 Nutritional Claims	Functional Claims
Product	Validation (PV)		
DV/1	Brand Name	. [. [
PV1	Full Product Name	V	ν
	Dosage Form		
DVA	- COA capsule shell is required	ſ	
PV2	- Colouring agent used in capsule	V	٧
	- Letter to verify the source of gelatin used		
PV3	List of Active ingredient(s)	$\sqrt{}$	$\sqrt{}$
PV4	List of excipient (s)		V
PV5-17	Other information (e.g., Manufacturer,premix etc., where applicable)	$\sqrt{}$	√
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 Animal shape is only allowed for 'For Export Only' (FEO) Products 		$\sqrt{}$
A7	Product indication/ Usage		
	Dose/ Use Instruction	•	·
	- Target population (e.g., Adults)		
A8	- Quantity and frequency	$\sqrt{}$	
	- Dosing schedule must be stated (e.g. take before/ after/ with meal)		
A10	Contraindication, if applicable	$\sqrt{}$	$\sqrt{}$
A11	Warning/ Precautions, if applicable		

No.	Field	General or Nutritional Claims	Functional Claims	
A12	Drug Interaction, if applicable	$\sqrt{}$		
A14	Side Effects/ Adverse Reactions, if applicable	$\sqrt{}$	$\sqrt{}$	
A15	Signs and Symptoms of overdose and treatment, if applicable	$\sqrt{}$	$\sqrt{}$	
A19	Storage Condition			
1117	- According to stability data	,	,	
	Shelf life		_	
A20	Must be supported by stability studyPlease refer subsection 5.40	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 (if applicable)		$\sqrt{}$	
	Letter of Acceptance from Contract 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.			

No.	Field	General or Nutritional Claims	Functional Claims
E4	Certificate of Free Sale (CFS)Applicable if CPP is not available, must be issued by the competent authority in the country of origin/ products owner country.	$\sqrt{}$	
E5	Certificate of Good Manufacturing Practice (GMP)Applicable if CPP is not available, must be issued by the competent authority in the manufacturing country.		
E6	Company name and address of manufacturer	$\sqrt{}$	$\sqrt{}$
E7	Company name and address of other manufacturer (if applicable)	$\sqrt{}$	$\sqrt{}$
E8	Importer(s)	$\sqrt{}$	$\sqrt{}$
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		V
	(GMP) for premixed active ingredients Hormone free test results (for placenta products)		

No.	Field	General or Nutritional Claims	Functional 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 So	ection P		
P3.2	Manufacturing Process		
P3.2.1	Attachment of Manufacturing Process Document or Manufacturing Flow Diagram	√	$\sqrt{}$
P3.3	In-Process Quality Control (IPQC)	√ *LOC to submit data during post registration	$\sqrt{}$
P5.1	Finished Product Specification (FPQC)	√ * LOC to submit data during post registration	$\sqrt{}$
P5.4.1	Attachment of Certificate of finished product (COA of finished product)	V	
Р8	Stability Data	√ ***Please refer subsection 5.40)	V
Part II So	ection S		
S4.1 & S4.4.1	Attachment of Specifications and Certificate of Analysis (COA) of Active Ingredient	$\sqrt{}$	$\sqrt{}$

^{*} 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 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 P2.4		
		P2. 4	Manufacturing Process	V
		P2.5	Development Container Closure System	
		P2.5 P2.6	-	
		P2.0 P2.7	Microbiological Attributes Compatibility	
	P3.		acturer	
	rs.		Batch Manufacturing Formula	
		P3.1 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 Claim
	P7. P8.	Container Closure System	
	P9.	Stability Product Interchangeability/Equivalent	
	F 9.	evidence	
		<u> </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.	Stability	

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	V
٥.	literature) of pharmacokinetics studies on the	v
	declared efficacy	
	Toxicology	
4.	- related information (including academic	$\sqrt{}$
	literature) of toxicology studies	
5.	Integrated overview and conclusions	
6.	Other toxicity studies if available	
7.	References	1/
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 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.
			SubjectStudy DurationOutcome parameters	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	
3.	Overview of Biopharmaceutics	./
3.	- To include associated analytical methods	V
4.	Overview of Clinical Pharmacology	1/
4.	- Summary of clinical pharmacology studies	V
5.	Overview of Efficiency	1/
J.	- Summary of clinical efficacy	V
6.	Overview of Safety	./
0.	- Summary of clinical safety	V
	References	
_	- 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	
ingretients	General	Functional	Reduced Risk Reduction Claim
Alpha _{s1} -Casein Tryptic Hydrolysate (Milk Protein Hydrolysate)	Helps in maintenance of good health	 Promotes/ Improves sleep quality Promotes relaxation 	
Alpha Linolenic Acid	Helps in maintenance of good health	Supports heart health	
Alpha Lipoic Acid	Helps in maintenance of good health	 Antioxidant Helps to promote glucose metabolism Supports healthy nervous system 	
Astaxanthin	Helps in maintenance of good health	Antioxidant	
Beta Carotene	Maintenance of good health	Helps in maintenance of growth, vision and tissue differentiation	
Biotin	Helps in maintenance of good health	 Helps to metabolize fats and carbohydrates Support healthy hair, skin and nails 	
Calcium	Helps in maintenance of good health	 Helps in the formation and maintenance of bones and teeth Claim for specific subgroup: Additional 	

Ingredients	Claims			
ang. omono	General	Functional	Reduced Risk Reduction Claim	
		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 Helps maintain		
Chondroitin Sulphate	Helps in maintenance of good health	muscle functionPromotes healthy joint		
Chromium	Helps in maintenance of good health	 Contributes to normal macronutrient metabolism Helps to support healthy blood sugar level 		
Citicoline	Helps in maintenance of good health	Helps to support healthy cognition		
Coenzyme Q10	Helps in maintenance of good health	 Supports heart health Antioxidant Promote energy production 		
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 cellAntioxidant		

Ingredients		Claims	
ingreuients	General	Functional	Reduced Risk Reduction Claim
		Supports in immune health	
Docosahexaenoic acid (DHA)	Helps in maintenance of good health	 Supports heart health Supports brain health Helps to maintain healthy level of triglycerides Supports eye health For fetal brain and eye development Supports joint health 	
Eicosapentaenoic acid (EPA)	Helps in maintenance of good health	 Supports heart health Supports brain health Helps to maintain healthy level of triglycerides Supports eye health Supports joint health 	
Fish Oil	Helps in maintenance of good health	Supports joint health	
Folic Acid	Helps in maintenance of good health	 Helps in formation of red blood cell For fetal development Support healthy cell division 	Helps prevent neural tube defects for women who are planning a pregnancy before conception and during 12 weeks of

Ingredients		Claims	
ingredients	General	Functional	Reduced Risk Reduction Claim
			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 maintenance of good health	For maintenance of good liver health	
Hyaluronic Acid	Helps in maintenance of good health	Maintains healthy skinSupports skin moisture	
Inulin	Helps in maintenance of good health	Helps to stimulate the growth of healthy bacteria (such as bifidobacteria) in the intestine	
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 Helps oxygen transport to body tissues Support energy production 	 Helps to prevent iron anemia Helps to prevent anemia due to iron deficiency
L-Arginine	Helps in maintenance of good health	A non-essential amino acid that is involved in protein synthesis	
L-Carnitine	Helps in maintenance of good health	Helps to aid fat metabolism	

Ingredients	Claims			
	General	Functional	Reduced Risk Reduction Claim	
L-Glutathione	Helps in maintenance of good health	Antioxidant		
L-Lysine	Helps in maintenance of good health	Source of essential amino acid for protein synthesis in the body		
Lecithin	Helps in maintenance of good health	Supports liver health		
Lutein	Helps in maintenance of good health	Supports eye healthAntioxidant		
Lycopene	Helps in maintenance of good health	AntioxidantHelps to support prostate health		
Magnesium	Helps in maintenance of good health	 Helps the body to metabolize carbohydrate Helps in the development and maintenance of bones and teeth Helps to maintain muscle function Helps in energy metabolism Helps to maintain heart muscle function Support nerve function Maintain normal electrolyte balance 		
Manganese	A factor in maintenance of good health	Helps to metabolize carbohydrates and proteins		

Ingredients	Claims			
ingretients	General	Functional	Reduced Risk Reduction Claim	
Mixed Tocotrienols	Helps in maintenance of good health	Supports brain health		
Monascus purpureus (Red yeast rice)	Helps in maintenance of good health	Helps maintain healthy cholesterol levels		
Nicotinamide Mononucleotide (NMN)	Helps in maintenance of good health	Helps in energy metabolism		
Oenothera biennis (Evening primrose oil)	Helps in maintenance of good health	Helps in management of premenstrual syndrome (PMS)		
Phosphorus	Helps in maintenance of good health	Helps in the formation and maintenance of bones and teeth		
Potassium	Helps in maintenance of good health	Supports healthy muscle function		
Probiotics	Helps in maintenance of good health	 Helps to improve a beneficial intestinal microflora Helps support gastrointestinal health 		
Pyrroloquinoline quinone (PQQ)	Helps in maintenance of good health	Antioxidant		

Ingredients		Claims	
	General	Functional	Reduced Risk Reduction Claim
Saw Palmetto Berry	Helps in maintenance of good health	Support healthy urinary flow	
Selenium	Helps in maintenance of good health	 Antioxidant Helps to maintain healthy thyroid function Supports immune system 	
Vaccinium macrocarpon (Cranberry) Fruit	Helps in maintenance of good health	Supports healthy urinary tract	
Vitamin A	Maintenance of good health	 Helps to maintain growth, vision and tissue development Aids in maintaining the health of the skin and mucous membrane Aids in maintenance of eye health Support healthy immune function 	
Vitamin B1 (Thiamine)	Helps to maintain good health	 Helps in maintenance of growth, vision and tissue differentiation Helps in carbohydrate metabolism Helps in energy metabolism Helps maintain healthy heart 	

Ingredients	Claims		
	General	Functional	Reduced Risk Reduction Claim
Vitamin B2 (Riboflavin)	A factor in maintenance of good health	 Helps the body to utilize energy from food/metabolize protein, fats and carbohydrates Claim for specific population subgroups: Additional amounts of Riboflavin are required during pregnancy and breast feeding when diet does not provide a sufficient daily intake 	
Vitamin B3 (Niacin)	A factor in maintenance of good health	 Helps normal growth and development Helps the body in utilization of energy from food 	
Vitamin B5 (Panthothenic Acid)	Helps in maintenance of good health	Helps to metabolize fats and carbohydrates	
Vitamin B6 (Pyridoxine)	A factor in maintenance of good health	 Helps the body to metabolize proteins, fats and carbohydrates Support healthy nervous system Helps in energy metabolism 	

Ingredients	Claims		
	General	Functional	Reduced Risk Reduction Claim
Vitamin B12 (Cyanocobalamine)	Helps in maintenance of good health	Helps in the formation of red blood cell	
Vitamin C Vitamin D	 Helps in maintenance of good health Maintenance of good health 	 For healthy bones, (cartilage), teeth, gums as well as general make-up of the body Supports in immune health Antioxidant Helps in collagen formation to maintain healthy bones Helps in normal development and maintenance of 	
Witnessin F		 bones and teeth Helps the body utilize calcium and phosphorus Claim for specific population subgroups: Elderly people who are confined indoors Supports in immune health Supports maintenance of normal muscle function 	
Vitamin E	Maintenance of good health	AntioxidantSupports in immune health	
Vitamin K	Helps in maintenance of good health	Support healthy bones	

Ingredients	Claims		
	General	Functional	Reduced Risk Reduction Claim
Vitis vinifera (Grape seed)	Helps in maintenance of good health	Antioxidant	
Zeaxanthin	Helps in maintenance of good health	Support eye health	
Zinc	A factor in maintenance of good health	 Helps to metabolize carbohydrates, fats and protein Supports in immune health Helps in connective tissue formation Antioxidant Helps maintain healthy male reproduction system Helps to maintain healthy skin Supports hair and nail health 	

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.