Food additive submission checklist – Extension of use

Instructions

This checklist is divided into several main sections, each with a specific set of requirements:

Section 1: Administrative
Section 2: Chemical safety
Section 3: Assessment of potential dietary exposure for the general population
Section 4: Toxicological safety
Section 5: Allergenic safety
Section 6: Nutritional safety
Section 7: Molecular biological and microbiological safety
Section 8: Additional considerations
Section 9: Proposed food additive label

As you work through each section, check off ☑ each completed item. If you have any questions concerning the items in this checklist, please contact the Submission Management and Information Unit (SMIU) via the following email address: smiu-ugdi@hc-sc.gc.ca. For information on how to prepare a food additive submission, please refer to Health Canada's guidance document, titled A Guide for the Preparation of Submissions on Food Additives. If further guidance is required, it is strongly recommended to request a pre-submission consultation with the Food Directorate.

How to submit

The food additive submission should be sent electronically through the Online Application Form for Pre-Market Submissions to the Food Directorate. Please review the guidance document, titled How to Complete the Online Application and Transport Form for Pre-Market Submissions to the Food Directorate.

Note: Your submission must be organized following the order and titles of the main sections (Sections 1 to 9) set out above. Failure to do so will result in the closure of your submission.

If you cannot provide each piece of information required by the checklist (i.e., if you do not check off ☐ for one of the boxes in the checklist), you must provide a written explanation to justify why each piece of missing information is not provided to support the safety assessment of the extension of use. Your explanation must be provided in the corresponding section of your submission, not in the checklist.

The submission should not omit, without explanation, any reports of investigations or planned investigations that could be used in an evaluation of the safety of the food additive.

All fields in this document are required*.

Section 1: Administrative	
1.1 Name of petitioner (manufacturer, company, consultant, importer, etc.)	
1.2 Name of food additive	
1.3 Cover letter This cover letter must include the following information:	
☐	Title of submission[1]
☐	Date cover letter is signed
☐	Submission type (i.e., food additive)
☐	Submission sub-type (i.e., extension of use)
☐	Substance name, as intended to be listed in the appropriate List(s) of the Lists of Permitted Food Additives
☐	Substance source, where applicable, as intended to be listed in the appropriate List(s) of the Lists of Permitted Food Additives
☐	Executive summary explaining the technological purpose or function of the food additive, types of foods in which it is proposed for use, and the proposed levels of use in each of those foods
☐	Reference to related submission number (e.g., pre-submission, resubmission), where applicable
☐	Signature
1.4 Authorization forms **Note:** A signed DPA form need only be provided if the primary contact is a designated party (e.g., consultant) authorized to act on behalf of the petitioner. The primary contact serves as the individual to which all correspondence from the Food Directorate will be sent.	
☐	Signed Designated Party Authorization (DPA) Form

[1] Please follow the naming convention for the Title: [Food additive name] [from (source), where applicable] in [food(s)] as a [function] OR to [briefly describe purpose] e.g., Ground limestone in confectionery as a colouring agent; Potassium polyaspartate in wine to inhibit crystal formation.

Section 2: Chemical safety

2.1 Description of the food additive

Note: Only provide the information required by subsection 2.1.2 if the food additive is an ingredient of a preparation that contains other ingredients (e.g., carriers, solvents, stabilizers). Otherwise, please provide written confirmation, in the corresponding subsection (i.e., 2.1.2) of your submission, that the food additive is not an ingredient of a preparation.

Only provide the information required by subsections 2.1.3(a) through 2.1.3(c) if the food additive is proposed for use in new foods in which that food additive has not been previously assessed.

2.1.1 Identity of the food additive	
☐	(a) Common or non-proprietary name
☐	(b) Chemical name[2]
☐	(c) CAS (Chemical Abstracts Service) registry number, where applicable
☐	(d) INS (International Number System) number, where applicable
☐	(e) CI (Colour Index) number, where applicable
☐	(f) Molecular weight
☐	(g) Empirical, structural, and molecular formulas, where applicable
☐	(h) Trade name
☐	(i) Full, quantitative chemical composition, including impurities, of the food additive
2.1.2 Details of the commercial food additive preparation	
☐	(a) Full, quantitative chemical composition
☐	(b) Description of the technological purpose of each ingredient
☐	(c) Confirmation that each ingredient is of food-grade quality
2.1.3 Chemical and physical properties	
☐	(a) Data from studies on the chemical and physical stability of the food additive. The studies must assess the following: i. Stability of the food additive as such (i.e., when not used in the proposed food) under recommended storage conditions; ii. Stability of the food additive under recommended processing and use conditions of the proposed food; and iii. Stability of the food additive in the proposed food over the shelf life of the food.

[2] Where applicable, the chemical name should follow the IUPAC (International Union of Pure and Applied Chemistry) rules of nomenclature.

☐	(b) Comments and supporting rationale on the fate of the food additive in the food – see section 2.2.1 of: A Guide for the Preparation of Submissions on Food Additives
☐	(c) Identification and level of any substance in the food that results from the use of the food additive
☐	(d) Characterization of particle size, shape, morphology, surface area, surface charge, and other size-dependent properties (e.g., agglomeration, aggregation, and dispersion)
2.1.4 Specifications	
☐	Data and corresponding certificates of analysis from at least **three**, non-consecutive batches of the food additive demonstrating the food additive meets its established chemical and microbiological food-grade specifications
2.2 Purpose and level of use of the food additive **Note**: Only provide the information required by subsections 2.2.3(b) through 2.2.3(d) if the food additive's technical function is consistent with that of a preservative (i.e., food additive that is used to control micro-organisms or oxidation in food).	
2.2.1 Purpose	
☐	(a) Detailed description of the intended technical effect(s) of the food additive in the food[3]
☐	(b) Exhaustive list of the specific foods or food categories (with a detailed description of each food category and examples of foods captured therein) in which the food additive is proposed for use[4]
2.2.2 Proposed maximum level of use	
☐	(a) The proposed maximum level of use of the food additive in each food[5] that would appear in the appropriate List(s) of the Lists of Permitted Food Additives – see section 2.2.2 of: A Guide for the Preparation of Submissions on Food Additives
☐	(b) The amount of the food additive that is proposed for use in each food that would appear in the appropriate List(s) of the Lists of Permitted Food Additives when the proposed use is in accordance with Good Manufacturing Practice (GMP)[6]
2.2.3 Directions for use	
☐	(a) Directions for use of the food additive – see section 2.2.2 of: A Guide for the Preparation of Submissions on Food Additives

[3] This description must include a detailed scientific explanation of how the food additive exerts its technical effect.
[4] If the proposed use(s) of the food additive impact(s) standardized foods (https://inspection.canada.ca/food-labels/labelling/industry/standards-of-identity-for-food/eng/1468511768544/1468511932838), you must indicate the specific standardized food and section from Part B of the *Food and Drug Regulations* (https://laws-lois.justice.gc.ca/eng/Regulations/c.r.c.,_c._870/index.html) that would be impacted by the use of the food additive.
[5] In the case of infant formula, the proposed maximum level of use must be expressed per 100 mL and per 100 kcal of infant formula.
[6] Where the limit prescribed for a food additive is stated to be "Good Manufacturing Practice", the amount of the food additive added to a food in manufacturing and processing shall not exceed the amount required to accomplish the purpose for which that additive is permitted to be added to that food.

☐	(b) Details on how and when the food additive will be added during the manufacture of the food(s) in which it is proposed for use
☐	(c) Details on how the food that is manufactured with the food additive will be prepared (e.g., cooking time and temperature, process controls, packaged in a vacuum or modified atmosphere, and any other process data)
☐	(d) Instructions to consumers regarding storage and preparation of the food that is manufactured with the food additive
2.3 Analytical method and residues **Note:** This information does not need to be included in the initial submission. The Food Directorate will request it if it is needed.	
☐	(a) A method of analysis for determining the amount of the food additive and any substance(s) in the food that results from the use of the food additive– see section 2.2.3 of: A Guide for the Preparation of Submissions on Food Additives
☐	(b) Data to indicate the residues that may remain in or upon the food when the food additive is used in accordance with Good Manufacturing Practice (GMP)
☐	(c) Proposed maximum limit(s) for residues of the food additive in or upon the food
2.4 Technological justification	
☐	Data establishing that the food additive will have the intended technical effect(s) under the proposed conditions of use[7] – see section 2.2.2 of: A Guide for the Preparation of Submissions on Food Additives

[7] Ideally, efficacy is demonstrated by the results of tests using graded levels of the food additive in the foods of interest under conditions that are representative of the "real world" conditions under which the food additive would be expected to function.

Section 3: Assessment of potential dietary exposure for the general population

3.1 Dietary exposure for general population	
☐	Overall assessment of the intake resulting from the proposed use(s) of the food additive using most recent Canadian consumption data, if possible, or equivalent with a supporting rationale that the data are appropriate for the Canadian population – see section 2.2.4.1 of: A Guide for the Preparation of Submissions on Food Additives
3.2 Considerations for dietary exposure	
☐	Intake of nutrients (e.g., sodium, potassium, calcium) from the proposed use of the food additive

Section 4: Toxicological safety

Note: Please see sections 2.2.4.2 and 2.2.4.3 of A Guide for the Preparation of Submissions on Food Additives for guidance on the toxicological safety considerations.

4.1 Toxicological studies		
☐	4.1.1 Absorption, distribution, metabolism, excretion (ADME)	
	☐	(a) Original study report
☐	4.1.2 Acute, oral	
	☐	(a) Study follows current Organisation for Economic Cooperation and Development (OECD) test guidelines
	☐	(b) Original study report
☐	4.1.3 Short term (e.g., 90 days), oral	
	☐	(a) Study follows current OECD test guidelines
	☐	(b) Original study report
☐	4.1.4 Long term/chronic, oral	
	☐	(a) Study follows current OECD test guidelines
	☐	(b) Original study report
☐	4.1.5 Genotoxicity, mutagenicity	
	☐	(a) Study follows current OECD test guidelines
	☐	(b) Original study report

☐	4.1.6 Genotoxicity, clastogenicity	
	☐	(a) Study follows current OECD test guidelines
	☐	(b) Original study report
☐	4.1.7 Reproductive, oral	
	☐	(a) Study follows current OECD test guidelines
	☐	(b) Original study report
☐	4.1.8 Developmental, oral	
	☐	(a) Study follows current OECD test guidelines
	☐	(b) Original study report
4.2 Toxicological safety narrative		
☐	(a) Detailed discussion of the toxicological safety of the food additive under the proposed conditions of use with references to supporting data (e.g., toxicological studies)	
☐	(b) For each study provided, a discussion of how the results of the study support the toxicological safety of the food additive under the proposed conditions of use	
☐	(c) Relevance (e.g., similarities/differences) of the test articles used in the toxicology studies to the safety of the food additive	

Section 5: Allergenic safety

5.1 Allergenic safety narrative	
☐	(a) Detailed discussion of the allergenic safety of the food additive under the proposed conditions of use with reference to supporting data
☐	(b) For each study provided, a discussion of how the results of the study support the allergenic safety of the food additive under the proposed conditions of use
☐	(c) Comments on the presence of priority allergens in the food additive

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Section 6: Nutritional safety	
6.1 Composition	
☐	(a) Information on the ability of the food additive to reduce or increase the nutrient content of the food manufactured with the food additive – see section 2.2.4.4 of: A Guide for the Preparation of Submissions on Food Additives
☐	(b) Quantitative estimate of how the proposed use of the food additive will change the nutrient content of the food manufactured with the food additive
☐	(c) Identification and level of any substance in the food (e.g., degradation products) that results from the use of the food additive
6.2 Nutrient bioavailability	
☐	Information on how the use of the food additive and its reaction products enhance or inhibit the bioavailability[8] of nutrients in the food that is manufactured with the food additive[9]
6.3 Gastrointestinal effects	
☐	(a) Information on how the use of the food additive and its reaction products affect the gastrointestinal tolerability of the food that is manufactured with the food additive
☐	(b) Detailed discussion on the likelihood and severity of any gastrointestinal effects caused by consumption of food manufactured with the food additive, considering 6.3(a)
6.4 Use of the food additive in infant formula If the food additive is intended to be used in infant formula, the following information must be included, as applicable. Otherwise, please provide written confirmation, in the corresponding subsection (i.e., 6.4) of your submission, that the food additive is not intended to be used in infant formula. **Note:** Only provide the information required by subsection 6.4(d) if the infant formula is intended for special medical purposes.	
☐	(a) Identification of the specific infant consumption sub-population(s) (e.g., healthy term infants, pre-term infants, infants with medical conditions)
☐	(b) Comments on the proposed use of the food additive in infant formula for special medical purposes
☐	(c) Maximum proposed level of use of the food additive in the infant formula, expressed per 100 mL and per 100 kcal of infant formula
☐	(d) Consumption rate of the infant formula by each infant sub-population

[8] Bioavailability refers to the accessibility of a nutrient to participate in metabolic or physiological processes.

[9] If changes to nutrient bioavailability are identified, you must provide a detailed discussion explaining how these changes may affect metabolic or physiological processes of the population as a whole and/or for specific groups. For example, if the absorption of dietary calcium is enhanced or inhibited by the use of the food additive or its reaction products, describe how this may change the health status of a vulnerable population.

6.5 Nutritional safety narrative	
☐	Detailed narrative that supports the overall nutritional safety[10] of the food additive and its reaction products under the proposed conditions of use, considering the totality of the evidence

Section 7: Molecular biological and microbiological safety

An assessment of the molecular biological and microbiological safety of food additives is only pertinent to those intended for use to control microorganisms in foods [i.e., food additives used as preservatives in accordance with the Marketing Authorization for Food Additives That May Be Used as Preservatives (SOR/2012-212)]. As such, the following information requirements are considered in assessing the molecular biological and microbiological safety, as well as the efficacy, of microbial preservatives of the Class II (antibacterial) and Class III (antifungal) types.

7.1 General information on the proposed preservative **Note:** Only provide the information required by subsection 7.1(d) if the preservative consists of, or is derived from, a microorganism. Otherwise, please provide written confirmation, in the corresponding subsection (i.e., 7.1) of your submission, that the preservative does not consist of, nor is it derived from, a microorganism.	
☐	(a) Information on whether Health Canada has previously reviewed the safety of the proposed preservative and its microbial source, where applicable
☐	(b) Information on the history of safe use of the proposed preservative and its microbial source organism (species and strain levels), where applicable, in other jurisdictions
☐	(c) Explanation of how the preservative achieves its intended technical effect (i.e., mode of action) when used as requested
☐	(d) Demonstration of absence of the microorganism in the proposed preservative product

[10] Nutritional safety includes risks to human health resulting from changes to the nutrient content, nutrient bioavailability, or gastrointestinal tolerability of the food manufactured with the food additive under conditions of the proposed use.

7.2 Safety of the source organism If the preservative consists of, or is derived from, an organism, the following information must be included, as applicable. Otherwise, please provide written confirmation, in the corresponding subsection (i.e., 7.2) of your submission, that the preservative does not consist of, nor is it derived from, an organism. **Note:** Only provide the information required by subsections 7.2(e) through 7.2(g) and 7.2(i) through 7.2(m) if the preservative consists of, or is derived from, a microorganism that has been genetically modified or is itself a genetically modified microorganism. Otherwise, please provide written confirmation, in the corresponding subsection (i.e., 7.2) of your submission, that the preservative does not consist of, nor is it derived from, a microorganism that has been genetically modified or is itself a genetically modified microorganism.	
☐	(a) Taxonomical name of the source and donor organisms (family, genus, species, and strain) based on the ICNP (International Code of Nomenclature of Prokaryotes) or the International Code of Nomenclature for algae, fungi, and plants
☐	(b) Deposition/ accession number of the source organism if it has been deposited in an official recognized culture collection
☐	(c) Comments on the potential of the source and donor organisms for pathogenicity, virulence, or other hazards to human health, such as metabolites, allergens, or antimicrobial resistance genes – see part A of section 2.2.4.5 of: A Guide for the Preparation of Submissions on Food Additives
☐	(d) Demonstration that the source organism does not express or contain clinically relevant antibiotics – see part A of section 2.2.4.5 of: A Guide for the Preparation of Submissions on Food Additives
☐	(e) Where the gene(s) of interest (e.g., coding sequence, signal sequence, codon optimization,) differ(s) from its/their wildtype counterpart, information on the nature of those changes and safety implications
☐	(f) Information on the design of expression cassette(s) and/or vector(s)
☐	(g) High level description of the design and development of the production strain
☐	(h) Information indicating that the production strain is well-characterized morphologically and phenotypically
☐	(i) Scientific data that establish the molecular characterization of the source organism, including but not limited to insert intactness, expression cassettes copy number, orientation of tandem expression cassettes, integration sites, specificity of integration – see part B of section 2.2.4.5 of: A Guide for the Preparation of Submissions on Food Additives
☐	(j) Information on any genes and/or regulatory elements that were disrupted, deleted, silenced, modified, or affected by the insertion at the integration site(s), or are proximal[11] to the insertion site(s)
☐	(k) Scientific data that demonstrate the genetic stability of the integration event or plasmid across several generations

[11] Proximal refers to regions immediately flanking the insertion site.

☐	(l) Information on whether the integration event(s) is/are likely to affect expression of genes proximal to the insertion site(s)
☐	(m) Bioinformatic analysis performed at the insertion site(s) and flanking sequences for any similarity hits against known toxins, allergens, and secondary metabolites
7.3 Intended usage in the food(s)	
☐	(a) Indication of the shelf life of the food(s) in which the preservative is intended to function
☐	(b) Reasoning for the intended use of the preservative in the food, which must include a clear statement explaining whether the preservative is to be used to control growth of specific foodborne pathogens[12] or to control growth of spoilage microorganisms[13] throughout the product's shelf life or both
☐	(c) Indication of whether the preservative is the only microbial control to be used or whether it will be used as part of a "multi-hurdle" microbial control strategy
☐	(d) Indication of whether the preservative is intended as a critical control point (CCP) or process control
7.4 Demonstration of efficacy in the food(s)	
☐	(a) Evidence of the preservative's efficacy in the food by the mode of action requested in 7.1(b) (i.e., bacteriostatic/ fungistatic or bactericidal/fungicide) – see part C of section 2.2.4.5 of: A Guide for the Preparation of Submissions on Food Additives
Note: For studies of efficacy in controlling pathogenic or spoilage microorganisms, a full description of the challenge study conditions must be submitted, which must include:	
☐	(b) Information on the specific pathogenic or spoilage microorganisms tested (species and strains) and a rationale for the choice of microorganism strains used in the study
☐	(c) Initial concentrations of the microorganisms and enumeration methods
☐	(d) Incubation temperatures and times for the inoculated samples
☐	(e) For refrigerated foods, information indicating that the storage temperatures of the inoculated tested samples simulate temperature abuse
☐	(f) Information on the physical and chemical characteristics of the food
☐	(g) Data regarding the log reduction of the strains tested at the end of the shelf life

[12] Pathogenic microorganisms are those that are of public health significance. It is the responsibility of the petitioner to determine which pathogenic microorganisms must be controlled by the preservative in the food(s) of interest. The Codex Alimentarius International Food Standards (https://www.fao.org/fao-who-codexalimentarius/codex-texts/list-standards/en/) may help in this regard (https://www.canada.ca/en/health-canada/services/food-nutrition/food-safety/food-related-illnesses.html). Health Canada has also published a non-exhaustive list of common causes of food-related illnesses.

[13] Spoilage microorganisms are those that subject food to decay and/or decomposition and/or indicate that a food is contaminated.

Section 8: Additional considerations **Note:** While the following information is not mandatory at this time, providing it may facilitate the evaluation process.	
8.1 Authorization of food additives in other jurisdictions and Codex Alimentarius provision(s)	
☐	Indicate whether the food additive is permitted or is under review in Australia and New Zealand, Europe, and the United States, for the same use(s) that you have requested in Canada, and whether there are provisions within any international Codex Alimentarius food standards, including the *General Standard for Food Additives*, that would accommodate such use(s), or provisions that are under consideration by Codex. Provide the documentation that substantiates the authorization or provision [e.g., letter from regulatory authority; reference to regulation; reference to provision in Codex standard(s)].
8.2 Domestic Substances List (DSL) and *New Substances Notification Regulations* (NSNR)	
☐	(a) Indicate whether the food additive and its source, where applicable, is/are listed on the Domestic Substances List
☐	(b) Explain whether notification of the food additive under the *New Substances Notification Regulations* is required

Section 9: Proposed food additive label **Note:** This information does not need to be included in the initial submission. The Food Directorate will request it if it is needed.	
☐	Specimens of the labelling proposed for the food additive – see section 2.2.5 of: A Guide for the Preparation of Submissions on Food Additives

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