

**GUIDE FOR THE MICROBIOLOGICAL QUALITY OF SPICES
AND HERBS USED IN PROCESSED MEAT AND POULTRY PRODUCTS
(CAC/GL 14-1991)**

1. Section I - SCOPE

This Guide applies to spices and herbs, harvested wild, or cultivated, which require treatment prior to their use as ingredients in processed meat and poultry products.

It lists methods for the treatment of spices and herbs together with end-product criteria that will improve and assure their suitability for use in processed meat and poultry products.

2. Section II - DEFINITIONS

2.1 *Spices and herbs* are the aromatic parts of the leaves, flowers or other parts of plants used to impart an aroma or taste to foods.

2.2 *Suitability for use* means a condition where the contamination of spices and herbs with microorganisms causing spoilage or public health problems has been reduced to an extent that the spices and herbs are acceptable as ingredients in processed meat and poultry products.

2.3 *Decontamination* means the reduction by physical or chemical means of viable microorganisms that would impair the suitability for use of spices and herbs.

2.4 *Treatment* means a decontamination process for spices and herbs. This includes sorting, irradiation, exposure to chemicals, extraction, heat processing, extrusion, and other similar physical or chemical methods.

3. Section III - TREATMENT

3.1 Treatment should be supervised by technically competent personnel.

3.2 All steps in the treatment process, including packaging should be performed without undue delay and under conditions which will minimize contamination, deterioration and development of microorganisms that will impair the suitability for use.

3.3 Methods of treatment should be so that the treated spices and herbs will meet the end-product criteria of these Guidelines.

3.4 The treatments should be performed in such a way that there is a minimum effect on quality and composition and a maximum decontamination effect.

3.4.1 Although heat processing or extrusion processes can have a strong bactericidal effect, not all spices and herbs can be exposed to such treatments without adversely affecting flavour and colour.

3.4.2 Where the treatment involves an extraction process, the extractant should be approved for use in food and used according to good manufacturing practice.

3.4.3 Where irradiation is used for the control of microbial contamination or insect infestation, this should be done in accordance with good irradiation practice and in conformity with the "Codex General Standard for Irradiated Foods" (CODEX STAN 106-1983) and the "Recommended International Code of Practice for the Operation of Irradiation Facilities Used for the Treatment of Foods" (CAC/RCP 19-1979-Rev.1).

3.4.4 Where the treatment involves exposure to chemicals to control microorganisms (e.g. fumigants) whether in solid, fluid or gaseous form, the chemicals used should be those approved for the purpose.

3.5 Process Identification

If the spices, herbs or mixtures thereof have been exposed to one of the above treatments, labelling of the non-retail containers shall either be given on the container or in accompanying documents.

3.6 Sampling and Quality Control Procedures

3.6.1 Each plant treating spices and herbs should employ a quality control programme to assure the safety and suitability for use of its products. This programme should be developed in accordance with the principles of HACCP for the specific treatment process, product and end-use of the product. The programme should provide for rejection of products whose suitability for use is impaired.

3.6.2 Laboratory procedures used should follow appropriate and recognized methods in order that the results may be readily interpreted.

4. Section IV - END-PRODUCT CRITERIA

Standard methods should be used for sampling, analysis and other determinations to meet the following criteria for spices, herbs and mixtures thereof with or without other food ingredients, and which have been treated according to this Guide:

4.1 Spices and herbs treated as in 3.4.2 and 3.4.4 should contain the lowest attainable amount of residue of the chemical(s) or extractant(s) used.

4.2 The microbiological specification of the treated spices or herbs should be compatible with the preservation parameters of the meat and poultry products in which they are used.