

Australian Standard®

AS 5013.20:2017

Food microbiology

Method 20: Preparation of test samples for microbiological examination—Poultry and poultry product surfaces

PREFACE

This Standard was prepared by the Standards Australia Committee FT-035, Food Microbiology, to supersede AS 5013.20—2004, *Food microbiology, Method 20: Preparation of test samples for microbiological examination—Poultry and poultry products*.

The objective of this Standard is to provide specific rules regarding the testing of poultry and poultry product surfaces that are not included in AS 5013.11.2—2006 (ISO 6887-2:2003), *Food microbiology, Method 11.2: Microbiology of food and animal feeding stuffs—Preparation of test samples, initial suspension and decimal dilutions for microbiological examination—Specific rules for the preparation of meat and meat products*, and ISO 17604, *Microbiology of the food chain—Carcass sampling for microbiological analysis*.

METHOD

1 SCOPE

This Standard sets out general instructions and specifies procedures to be followed for taking a laboratory sample from poultry and poultry product surfaces, for the purpose of microbiological examination.

2 APPLICATION

This Standard applies to whole or portions of poultry carcasses. It is intended for use in accordance with other methods in the AS 5013 series.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

NOTE: Related documents are listed in the Bibliography.

AS

5013 Food microbiology (series)

4 DEFINITIONS

For the purposes of this Standard, the definitions below apply.

4.1 Poultry

Dressed or otherwise, whole or portions of chicken, turkey, duck, squab (pigeons), geese, pheasants, quail, guinea fowl, muttonbirds and other avian species (except ratites).

NOTE: Derived from Standard 4.2.2, *Primary production and processing standard for poultry meat (Australia only)*, Australia New Zealand Food Standards Code.

4.2 Poultry product

Any product, which may be coated or uncoated, fresh, chilled or frozen, that consists wholly or mainly of poultry.

5 RINSE FLUID AND REAGENTS

5.1 General

For the preparation of the rinse fluid, dehydrated basic components or equivalent, commercially prepared reagents may be used. The manufacturer's instructions shall be rigorously followed.

The chemicals used shall be of analytical quality.

The water used shall be distilled, deionized or purified by reverse osmosis, and shall be free from substances that might inhibit growth of microorganisms under the test conditions.

pH measurements shall be carried out using a pH meter, adjusted to a temperature of 25°C.

5.2 Rinse fluid

5.2.1 Buffered peptone water

Composition:

Peptone.....	10.0 g
Sodium chloride.....	5.0 g
Disodium hydrogen phosphate dodecahydrate, Na ₂ HPO ₄ 12H ₂ O	9.0 g
Potassium dihydrogen phosphate, KH ₂ PO ₄	1.5 g
Water.....	1.0 L

5.2.2 Preparation and distribution of rinse fluid

Dissolve the ingredients in the water, by heating if necessary. Adjust the pH so that, after sterilization, it is 7.0 ±0.1 at 25°C. Dispense into flasks or bottles of appropriate capacity. Sterilize in the autoclave (Clause 6.2) at 121°C for 15 mins.

5.3 Ethanol, 95% to 96% (V/V)

5.4 Disinfectant mixture

Composition:

Ethanol (Clause 5.3)	60 mL
Hydrochloric acid (specific gravity $\rho = 1.19$ g/mL)	10 mL
Water.....	30 mL

Or suitable equivalent compound or mixture that achieves effective disinfection of surfaces.

6 APPARATUS AND GLASSWARE

6.1 General

The usual microbiological laboratory equipment and, in particular, the following apparatus shall be used.

NOTE: Disposable apparatus is an acceptable alternative to glassware if it has appropriate specifications.

6.2 Apparatus for dry sterilization (oven) or wet sterilization (autoclave)

Apparatus that will enter into contact with the rinse fluids or the sample, except for apparatus that is supplied sterile (particularly plastics apparatus), shall be sterilized either by being kept in the—

- (a) oven at 170°C to 175°C for not less than 1 h; or
- (b) autoclave at 121°C for not less than 15 min.

6.3 Refrigerator and freezer

Refrigerator capable of being maintained at 2°C to 8°C, and a freezer capable of being maintained at or below –15°C, for the storage of samples.

6.4 Instruments (sterilizable)

Instruments for opening packages of poultry and poultry products and templates for swabbing.

6.5 Carcass sponges, polyurethane or equivalent

Free from antimicrobial substances, packed individually in sterile plastic bags, used for the sampling of large surfaces ($\geq 100 \text{ cm}^2$).

7 STORAGE OF SAMPLES

7.1 General

The sample shall be—

- (a) stored at the prescribed temperature; and
- (b) protected from direct sunlight or other sources of heat.

Contamination shall be prevented.

Examination of the sample shall be started as soon as possible after receipt of the sample, within the time limits given in Clauses 7.2 and 8.2.

7.2 Poultry and poultry products

Samples of the poultry and poultry products shall be stored as follows:

- (a) *Fresh poultry* Samples shall be stored in the refrigerator (Clause 6.3) on receipt and shall be examined within 24 h.

If a longer storage period is absolutely unavoidable, samples shall be stored in the freezer (Clause 6.3) as soon as possible.

If a sample has been frozen, the test report shall state the temperature and duration of frozen storage.

- (b) *Frozen poultry* Samples shall reach the laboratory in a frozen condition. The samples shall be stored in the freezer (Clause 6.3) until they are thawed for testing.

Samples arriving at the laboratory in a thawed condition shall not be tested unless specifically requested. If a frozen sample that is thawed on receipt is tested, the test report shall state the temperature of the sample on receipt.