

TEA & HERBAL INFUSIONS EUROPE

Formerly: European Tea Committee (ETC) and European Herbal Infusions Association (EHIA)



THIE'S RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR TRADE IN HERBAL INFUSION RAW MATERIALS (DRY)

Issue 9, June 2015

THIE'S RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR HERBAL INFUSIONS (DRY)

Issue 6, June 2015

THIE'S RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR EXTRACTS OF HERBAL AND FRUIT INFUSIONS

Issue 3, June 2015



THIE'S RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR TRADE IN HERBAL INFUSIONS RAW MATERIALS (DRY)

MICROBIOLOGICAL LIMITS

<i>Aerobic Plate Count</i>	$\leq 10^8 / \text{g}$
<i>Yeasts (Mint excluded)</i> ¹⁾	$\leq 10^6 / \text{g}$
<i>Moulds</i>	$\leq 10^6 / \text{g}$
<i>E. coli</i>	$\leq 10^4 / \text{g}$
<i>Salmonella</i>	absent in 125 g

GUIDANCE VALUE ²⁾

<i>Enterobacteriaceae</i>	$\leq 10^6 / \text{g}$
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SAMPLING

- 5 random samples of 50 g are to be collected from the shipment.
- The 5 samples will be mixed to a composite sample.
- The composite sample is the basis for all laboratory investigations, including salmonella.

METHODS *

Aerobic Plate Count

Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degrees C by the pour plate technique (ISO 4833-1:2013); Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 degrees C by the surface plating technique (ISO 4833-2:2013 and ISO 4833-2:2013/Cor 1:2014); European Reference Method according to Regulation (EC) No 1441/2007

Yeasts and Moulds

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of yeasts and moulds – Part 2: Colony count technique in products with water activity less than or equal to 0.95 (ISO 21527-2:2008)

E. coli

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 1: Colony-count technique at 44 degrees C using membranes and 5-bromo-4-chloro-3-indolyl beta-D-glucuronide (ISO 16649-1:2001) or Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide (ISO 16649-2:2001); European Reference Method according to Regulation (EC) No 1441/2007



Salmonella

Microbiology of the food chain -- Horizontal method for the detection, enumeration and serotyping of Salmonella -- Part 1: Horizontal method for the detection of Salmonella spp. (ISO/DIS 6579-1:2014); European Reference Method according to Regulation (EC) No 1441/2007

Enterobacteriaceae

Microbiology of food and animal feeding stuffs – Horizontal methods for the detection and enumeration of Enterobacteriaceae – Part 2: Colony – count method (ISO 21528-2:2004); European Reference Method according to Regulation (EC) No 1441/2007

- 1) *For mint no yeast specification is applicable due to the high natural yeast load.*
- 2) *THIE recommends monitoring Enterobacteriaceae as an additional hygienic parameter.*
- * Other methods can be used if they are checked against a reference method (official method and suitability tested [recovery of reference microorganisms]).



THIE'S RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR HERBAL INFUSIONS (DRY)

MICROBIOLOGICAL LIMITS

<i>Aerobic Plate Count</i>	$\leq 10^7 / \text{g}$
<i>Yeasts</i>	$\leq 10^5 / \text{g}$
<i>Moulds</i>	$\leq 10^5 / \text{g}$
<i>E. coli</i>	$\leq 10^3 / \text{g}$
<i>Salmonella</i>	absent in 125 g

GUIDANCE VALUE ¹⁾

<i>Enterobacteriaceae</i>	$\leq 10^5 / \text{g}$
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SAMPLING

- 5 random samples of 50 g are to be collected from the shipment.
- The 5 samples will be mixed to a composite sample.
- The composite sample is the basis for all laboratory investigations, including salmonella.

METHODS *

Aerobic Plate Count

Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degrees C by the pour plate technique (ISO 4833-1:2013); Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 degrees C by the surface plating technique (ISO 4833-2:2013 and ISO 4833-2:2013/Cor 1:2014); European Reference Method according to Regulation (EC) No 1441/2007

Yeasts and Moulds

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of yeasts and moulds – Part 2: Colony count technique in products with water activity less than or equal to 0.95 (ISO 21527-2:2008)

E. coli

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 1: Colony-count technique at 44 degrees C using membranes and 5-bromo-4-chloro-3-indolyl beta-D-glucuronide (ISO 16649-1:2001) or Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 2: Colony-count technique at 44 degrees C using



5-bromo-4-chloro-3-indolyl beta-D-glucuronide (ISO 16649-2:2001); European Reference Method according to Regulation (EC) No 1441/2007

Salmonella

Microbiology of the food chain -- Horizontal method for the detection, enumeration and serotyping of Salmonella -- Part 1: Horizontal method for the detection of Salmonella spp. (ISO/DIS 6579-1:2014); European Reference Method according to Regulation (EC) No 1441/2007

Enterobacteriaceae

Microbiology of food and animal feeding stuffs – Horizontal methods for the detection and enumeration of Enterobacteriaceae – Part 2: Colony – count method (ISO 21528-2:2004); European Reference Method according to Regulation (EC) No 1441/2007

ADDITIONAL REMARK

Herbal infusions are parts of plants which are intended for infusing with freshly boiling water and brewing for at least 5 minutes/5-x minutes.

¹⁾ THIE recommends monitoring *Enterobacteriaceae* as an additional hygienic parameter.

* Other methods can be used if they are checked against a reference method (official method and suitability tested [recovery of reference microorganisms]).



THIE'S RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR EXTRACTS OF HERBAL AND FRUIT INFUSIONS

MICROBIOLOGICAL LIMITS

<i>Aerobic Plate Count</i>	$\leq 10^3$ / g
<i>Yeasts</i>	$\leq 10^2$ / g
<i>Moulds</i>	$\leq 10^2$ / g
<i>Enterobacteriaceae</i>	$\leq 10^2$ / g
<i>E. coli</i>	absent / g
<i>Salmonella</i>	absent in 25 g

SAMPLING

- Per batch, resp. homogeneous unit at least 1 sample has to be taken.
- Sample size at least 100 g
- The sample is the basis for all laboratory investigations

METHODS*

Aerobic Plate Count

Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degrees C by the pour plate technique (ISO 4833-1:2013); Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 degrees C by the surface plating technique (ISO 4833-2:2013 and ISO 4833-2:2013/Cor 1:2014); European Reference Method according to Regulation (EC) No 1441/2007

Yeasts and Moulds

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of yeasts and moulds – Part 1: Colony count technique in products with water activity greater than 0.95 (ISO 21527-1:2008); Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of yeasts and moulds – Part 2: Colony count technique in products with water activity less than or equal to 0.95 (ISO 21527-2:2008)

E. coli

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 1: Colony-count technique at 44 degrees C using membranes and 5-bromo-4-chloro-3-indolyl beta-D-glucuronide (ISO 16649-1:2001) or Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide (ISO 16649-2:2001); European Reference Method according to Regulation (EC) No 1441/2007



Enterobacteriaceae

Microbiology of food and animal feeding stuffs – Horizontal methods for the detection and enumeration of Enterobacteriaceae – Part 2: Colony – count method (ISO 21528-2:2004); European Reference Method according to Regulation (EC) No 1441/2007

Salmonella

Microbiology of the food chain -- Horizontal method for the detection, enumeration and serotyping of Salmonella -- Part 1: Horizontal method for the detection of Salmonella spp. (ISO/DIS 6579-1:2014); European Reference Method according to Regulation (EC) No 1441/2007

GENERAL

Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – Part 1: General rules for the preparation of the initial suspension and decimal dilutions (ISO 6887-1:1999)

Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – Part 4: Specific rules for the preparation of products other than milk and milk products, meat and meat products, and fish and fishery products (ISO 6887-4:2003)

ADDITIONAL REMARK

All THIE Recommended Microbiological Specifications are reviewed annually.

* Other methods can be used if they are checked against a reference method (official method and suitability tested [recovery of reference microorganisms]).