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 12, June 2024

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

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

Issue 5, June 2024

THIE's RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR HERBAL INFUSIONS EXPLICITLY LABELLED AS COLD BREW PRODUCTS (CBP)

Issue 2, June 2024

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Issue 12, June 2024

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

MICROBIOLOGICAL LIMITS

Aerobic Plate Count	≤ 10^8 / g
Yeasts (Mint excluded) [1)]	≤ 10^6 / g
Moulds	≤ 10^6 / g
E. coli	≤ 10^4 / g
Salmonella	absent in 125 g

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)
The Scope of ISO 21527 is for dried products with aw-values between < 0.95 and 0.6. For dried products with aw-values of < 0.6 evidence has to be provided that the method is fit for purpose.

E. coli

Microbiology of the food chain – 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 16649-1:2018) 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: Detection of Salmonella spp. (ISO 6579-1:2017); European Reference Method according to Regulation (EC) No 1441/2007

ADDITIONAL REMARK

All THIE Recommended Microbiological Specifications are reviewed annually.

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1) *For mint no yeast specification is applicable due to the high natural yeast load.*

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

Issue 9, June 2024

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

MICROBIOLOGICAL LIMITS

Aerobic Plate Count	≤ 10^7 / g
Yeasts	≤ 10^5 / g
Moulds	≤ 10^5 / g
E. coli	≤ 10^3 / g
Salmonella	absent in 125 g

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)
The Scope of ISO 21527 is for dried products with aw-values between < 0.95 and 0.6. For dried products with aw-values of < 0.6 evidence has to be provided that the method is fit for purpose.

E. coli
Microbiology of the food chain – 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 16649-1:2018) 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: Detection of Salmonella spp. (ISO 6579-1:2017); 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.

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]).

Issue 5, June 2024

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

MICROBIOLOGICAL LIMITS

Aerobic Plate Count	≤10^3 / g
Yeasts	≤ 10^2 / g
Moulds	≤ 10^2 / g
E. coli	absent / g
Salmonella	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)
The Scope of ISO 21527 is for dried products with aw-values between < 0.95 and 0.6. For dried products with aw-values of < 0.6 evidence has to be provided that the method is fit for purpose.

E. coli

Microbiology of the food chain – 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 16649-1:2018) 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: Detection of Salmonella spp. (ISO 6579-1:2017); European Reference Method according to Regulation (EC) No 1441/2007

GENERAL

Microbiology of the food chain -- 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 6887-1:2017)

Microbiology of the food chain -- Preparation of test samples, initial suspension and decimal dilutions for microbiological examination -- Part 4: Specific rules for the preparation of miscellaneous products (ISO 6887-4:2017)

ADDITIONAL REMARK

All THIE Recommended Microbiological Specifications are reviewed annually.

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

Issue 2, June 2024

THIE's RECOMMENDED MICROBIOLOGICAL SPECIFICATION FOR HERBAL INFUSIONS EXPLICITLY LABELLED AS COLD BREW PRODUCTS (CBP)

MICROBIOLOGICAL LIMITS

Aerobic Plate Count	≤ 5 * 10^4 / g
Yeasts	≤ 5 * 10^2 / g
Moulds	≤ 5* 10^2 / g
E. coli	absent in 1 g
Salmonella	absent in 125 g

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)

The Scope of ISO 21527 is for dried products with aw-values between < 0.95 and 0.6. For dried products with aw-values of < 0.6 evidence has to be provided that the method is fit for purpose.

E. coli

Microbiology of the food chain – 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 16649-1:2018) 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: Detection of Salmonella spp. (ISO 6579-1:2017); European Reference Method according to Regulation (EC) No 1441/2007

ADDITIONAL REMARKS

In order to ensure the microbiological safety of the products, appropriate measures and suitable bacteria reduction treatments of the raw materials must be applied.

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]).