ZAKRES AKREDYTACJI LABORATORIUM BADAWCZEGO
SCOPE OF ACCREDITATION FOR TESTING LABORATORY
Nr/No. AB 452

wydany przez / issued by
POLSKIE CENTRUM AKREDYTACJI
01-382 Warszawa, ul. Szczotkarska 42

Wydanie/Issue 25 z/of 30.10.2025

AB 452	Nazwa i adres / Name and address **INSTYTUT BIOTECHNOLOGII PRZEMYSŁU ROLNO-SPOŻYWCZEGO IM. PROF. WACŁAWA DĄBROWSKIEGO – PAŃSTWOWY INSTYTUT BADAWCZY** **ul. Rakowiecka 36** **02-532 Warszawa**

Kod identyfikacyjny / Identification code *)	**Dziedzina i przedmiot badań / Field of testing and item:**
– C/1; C/22; C/55; C/57	– Badania chemiczne produktów rolnych, żywności, pasz dla zwierząt i obiektów z obszaru produkcji żywności / Chemical tests of agricultural products, food, animal feedstuffs and objects from food production area
– N/1; N/22; N/57	– Badania właściwości fizycznych produktów rolnych, żywności i obiektów z obszaru produkcji żywności / Tests of physical properties of agricultural products, food and objects from food production area
– K/1; K/22; K/29; K/57	– Badania mikrobiologiczne produktów rolnych, żywności, wody do spożycia przez ludzi i obiektów z obszaru produkcji żywności / Microbiological tests of agricultural products, food, drinking water and objects from food production area
– Q/22; Q/57	– Badania sensoryczne żywności i obiektów z obszaru produkcji żywności / Sensory tests of food and objects from food production area

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*) Kod identyfikacyjny zgodnie z załącznikiem do dokumentu DAB-07 dostępnym na stronie internetowej www.pca.gov.pl / The identification code according to the Annex to document DAB-07, available at PCA website www.pca.gov.pl

KIEROWNIK DZIAŁU AKREDYTACJI BADAŃ I CERTYFIKACJI ŻYWNOŚCI

HANNA TUGI

Niniejszy dokument jest załącznikiem do Certyfikatu Akredytacji Nr AB 452 z dnia 15.01.2021 r.
Cykl akredytacji od 04.10.2023 r. do 23.12.2027 r.
Status akredytacji oraz aktualność zakresu akredytacji można potwierdzić na stronie internetowej PCA *www.pca.gov.pl*

This document is an annex to accreditation certificate No. AB 452 of 15.01.2021
Accreditation cycle from 04.10.2023 to 23.12.2027
The status of accreditation and validity of the scope of accreditation can be confirmed at PCA website *www.pca.gov.pl*

Zakład Bezpieczeństwa i Analizy Chemicznej Żywności (ZA) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Fruit, vegetables, and products **Drinks, juices, fruit and vegetable concentrates** **Edible concentrates** **Cereals and cereal products** **Alcohol raw materials and beverages** **Sugar industry raw materials and products** **Herbs and spices** **Vitamin-mineral preparations**	Calcium, magnesium content Range: Calcium (1,0-40000) mg/l or mg/kg Magnesium (1,0-5000) mg/l or mg/kg Flame atomic absorption spectrometry method (FAAS)	PB-ZA 01 issue 6 of 01.03.2022
	Sodium, potassium content Range: Sodium (1,0-40000) mg/l or mg/kg Potassium (5,0-25000) mg/l or mg/kg Flame atomic emission spectrometry method (FAES)	
	Cadmium, lead content Range: Cadmium (0,020-1,00) mg/l or mg/kg Lead (0,020-3,00) mg/l or mg/kg Atomic absorption spectrometry method with electrothermal atomization (ETAAS)	PN-EN 14084:2004
	Zinc, iron, copper content Range: Zinc (0,20-1000) mg/l or mg/kg Iron (0,50-1500) mg/l or mg/kg Copper (0,20-100) mg/l, or mg/kg Flame atomic absorption spectrometry method (FAAS)	
	Phosphorus content Range: (10-2000) mg/l or mg/kg Atomic absorption spectrometry method with electrothermal atomization (ETAAS)	PB-ZA 15 issue 5 of 01.06.2023
Fruit, vegetables, and products **Drinks, juices, fruit and vegetable concentrates** **Edible concentrates** **Cereals and cereal products** **Alcohol raw materials and beverages** **Sugar industry raw materials and products** **Herbs and spices** **Vitamin-mineral preparations** **Hemp-based products**	Mercury content Range: (0,0010-0,20) mg/l or mg/kg Atomic absorption spectrometry method with amalgamation technique	PB-ZA 04 issue 8 of 20.06.2024

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Tea, teas fruit and herb **Cereals and cereal products** **Juices, fruit and vegetable concentrates** **Alcoholic and non-alcoholic beverages** **Hemp-based products**	Content of: cadmium, arsenic, zinc, copper, iron, lead, selenium, tin, nickel Range: Cadmium (0,0010-10) mg/l or mg/kg Arsenic (0,010-10) mg/l or mg/kg Zinc (0,010-100) mg/l or mg/kg Copper (0,010-100) mg/l or mg/kg Iron (0,010–100) mg/l or mg/kg Lead (0,0010–10) mg/l or mg/kg Selenium (0,050–10) mg/l or mg/kg Tin (0,020–0,30) mg/l or mg/kg Nickel (0,010-100) mg/l or mg/kg Inductively coupled plasma ionization mass spectrometry method (ICP-MS)	PB-ZA 20 issue 3 of 24.06.2024
Non-alcoholic beverages **Processed fruit and vegetable products** **Confectionery products**	Aspartame, acesulfame K and saccharin contens Range: Aspartame (5,0-2000) mg/l or mg/kg Acesulfame K (1,0-1000) mg/l or mg/kg Saccharin (2,0-600) mg/l or mg/kg High performance liquid chromatography method with fluorescent detection (HPLC-UV)	PN-EN 12856:2002
Juices and concentrated fruit juices	Lactic acid and fumaric acid content Range: Lactic acid: (0,10-1,0) g/l Fumaric acid: (0,65-9,0) mg/l High performance liquid chromatography with spectrophotometric detection (HPLC-UV)	PB-ZA 57 issue 5 of 22.05.2024
Liquid and powdered milk **Fruit juices and syrups**	Vitamin D3 content Range: (2,50-320) µg/kg Gas chromatography-tandem mass spectrometry method (GC-MS/MS)	PB-ZA 53 issue 2 of 31.01.2025

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Beer	Contents of saturated, monounsaturated, polyunsaturated fatty acids Contents of fatty acids trans isomers Range: (0,0010–1,0) g/100g Gas chromatography method with flame ionization detection (GC/FID)	PB ZA 33 issue 4 of 22.04.2021
Oils and fats	Contents of saturated, monounsaturated, polyunsaturated fatty acids Contents of fatty acids trans isomers Range: (0,10–100) g/100g Gas chromatography method with flame ionization detection (GC/FID)	
Raw and processed plant products, with less than 5% fat	Contents of saturated, monounsaturated, polyunsaturated fatty acids Contents of fatty acids trans isomers Range: (0,10–5,0) g/100g Gas chromatography method with flame ionization detection (GC/FID)	
Raw and processed plant products with more than 5% fat	Contents of saturated, monounsaturated, polyunsaturated fatty acids Contents of fatty acids trans isomers Range: (0,10–50) g/100g Gas chromatography method with flame ionization detection (GC/FID)	

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Cereal products **Vegetable and fruit crisps** **Coffee**	Acrylamide content Range: (10-1000) µg/kg Gas chromatography method with mass spectrometry detection (GC-MS)	PB-ZA 37 issue 4 of 28.05.2021
Cereals and cereal products **Spices**	Ochratoxin A content Range: (0,40-30,0) µg/kg High performance liquid chromatography (HPLC-FLD) method with fluorescent detection	PB-ZA 52 issue 5 of 14.05.2025
Dried fruit	Ochratoxin A content Range: (0,20-10) µg/kg High performance liquid chromatography (HPLC-FLD) method with fluorescent detection	PN-EN 15829:2010
Spices **Cereals and cereal products** **Dried fruit**	Aflatoxin B_1,B_2,G_1,G_2 content Range: (0,50-15) µg/kg High performance liquid chromatography (HPLC-FLD) method with fluorescent detection	PB-ZA 54 issue 5 of 14.05.2024
Apple juices and drinks, apple paste	Patulin content Range: (5,0-100) µg/l or µg/kg High-performance liquid chromatography with diode-array detection (HPLC-DAD) method	PN-EN 14177:2005
Fruit juices, beverages	Patulin content Range: (5,0-100) µg/l High-performance liquid chromatography with diode-array detection (HPLC-DAD) method	PB-ZA 31 issue 10 of 20.06.2024
Processed fruit products **Sugar, sugar industry by- products**	Patulin content Range: (10-100) µg/kg High-performance liquid chromatography with diode-array detection (HPLC-DAD) method	
Cereals and cereal products **Bakery products** **Cereal-based foods for children**	Zearalenone content (ZEN) Range: (10-500) µg/kg Fluorescent high performance liquid chromatography (HPLC-FLD) method	PN-EN 15850:2010
	Deoxynivalenol (DON) content Range: (100-2000) µg/kg High performance liquid chromatography with spectrophotometric detection (HPLC-UV)	PN-EN 15891:2010
Liquid milk	Aflatoxin M1 and M2 content Range: Afla M1 (0,0025-0,16) µg/kg Afla M2 (0,0013-0,50) µg/kg High-performance liquid chromatography with fluorescence detector (HPLC-FLD)	PB-ZA 67 issue 1 of 31.03.2025
Powdered milk	Aflatoxin M1 and M2 content Range: Afla M1 (0,025-1,6) µg/kg Afla M2 (0,013-1,0) µg/kg High-performance liquid chromatography with fluorescence detector (HPLC-FLD)	

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Cereals and cereal products **Baked goods** **Cereal-based foods for children**	Mycotoxin content Range: Afla B1 (0,20-25,6) µg/kg Afla B2 (0,20-25,6) µg/kg Afla G1 (0,20-25,6) µg/kg Afla G2 (0,20-25,6) µg/kg Total aflatoxins (0,80-102,4) µg/kg OTA (0,40-25,6) µg/kg DON (20-3000) µg/kg ZEN (2,0-512) µg/kg FB1 (50-3000) µg/kg FB2 (25-2000) µg/kg FB3 (25-1000) µg/kg Total FB1 and FB2 (75-5000) µg/kg HT-2 (4,0-512) µg/kg T-2 (2,0-512) µg/kg Total HT-2 and T-2 (6,0-1024) µg/kg High-performance liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS)	PB-ZA 60 issue 1 of 20.05.2025
Cereal grains **Baked goods**	Rye ergot alkaloid content Range: Ergotamine (16-400) µg/kg Ergotaminine (4,0-100) µg/kg Ergocornine (16-400) µg/kg Ergocorninine (4,0-100) µg/kg Ergocristine (16-400) µg/kg Ergocristinine (4,0-100) µg/kg Ergocryptine (16-400) µg/kg Ergocryptinine (4,0-100) µg/kg Ergosine (16-400) µg/kg Ergosinine (4,0-100) µg/kg Ergometrine (48-400) µg/kg Ergometrinine (12-100) µg/kg High-performance liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS)	PB-ZA 62 issue 2 of 14.05.2025
Poppy seeds and products containing poppy seeds	Opium alkaloids content: Range: Morphine (0,10-160) mg/kg Codeine (0,10-160) mg/kg Oripavine (0,10-160) mg/kg Papaverine (0,10-160) mg/kg Thebaine (0,10-160) mg/kg Noscapine (0,10-160) mg/kg High-performance liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS)	

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Cereals and cereal products	Tropane alkaloids content: Range: Atropine (0,10-61,4) µg/kg Scopolamine (0,10-66,6) µg/kg High-performance liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS)	PB-ZA 62 issue 2 of 14.05.2025
Tea **Herbs and herbal products**	Pyrrolizidine alkaloids content Range: Intermedine (3,0–500) µg/kg Intermedine N-oxide + indicine N-oxide (total) (6,0–1000) µg/kg Lycopsamine + indicine (total) (6,0–1000) µg/kg Lycopsamine N-oxide (3,0–500) µg/kg Senecionine (3,0–500) µg/kg Senecionine N-oxide (3,0–500) µg/kg Senecivernine (3,0–500) µg/kg Seneciphylline (3,0–500) µg/kg Seneciphylline N-oxide (3,0–500) µg/kg Retrorsine (3,0–500) µg/kg Retrorsine N-oxide (3,0–500) µg/kg Echimidine (3,0–500) µg/kg Echimidine N-oxide (3,0–500) µg/kg Lasiocarpine (3,0–500) µg/kg Lasiocarpine N-oxide (3,0–500) µg/kg Senkirkine (3,0–500) µg/kg Europine (3,0–500) µg/kg Europine N-oxide (3,0–500) µg/kg Heliotrine (3,0–500) µg/kg Heliotrine N-oxide (3,0–500) µg/kg Echinatine N-oxide (3,0–500) µg/kg Rinderine + echinatine (total) (6,0–1000) µg/kg Rinderine N-oxide (3,0–500) µg/kg Integerrimine (3,0–500) µg/kg Integerrimine N-oxide + senecivernine N-oxide (total) (6,0–1000) µg/kg Heliosupine (3,0–500) µg/kg Heliosupine N-oxide (3,0–500) µg/kg Spartioidine (3,0–500) µg/kg Spartioidine N-oxide (3,0–500) µg/kg Usaramine (3,0–500) µg/kg Usaramine N-oxide (3,0–500) µg/kg High-performance liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS)	

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Dried Hemp	Cannabinoid content Range: Cannabidiol CBD (400-51200) mg/kg Cannabidiolic acid CBDA (4000-512000) mg/kg Cannabigerol CBG (80-10240) mg/kg Cannabigerolic acid CBGA (4000-512000) mg/kg Δ9-tetrahydrocannabinol Δ9 -THC (160-20480) mg/kg Δ9-tetrahydrocannabinolic acid Δ9-THCA (160-20480) mg/kg Δ8-tetrahydrocannabinol Δ8-THC (1,6-204,8) mg/kg Cannabichromene CBC (40-5120) mg/kg Cannabichromenic acid CBCA (16-20480) mg/kg Cannabicyclol CBL (40-5120) mg/kg Cannabicyclolic acid CBLA (4,0-512) mg/kg Cannabinol CBN (16-2048) mg/kg Cannabinolic acid CBNA (4,0-512) mg/kg Δ9-tetrahydrocannbivarin Δ9-THCV (1,6-204,8) mg/kg Δ9-tetrahydrocannbivarinic acid Δ9-THCVA (40-5120) mg/kg Cannabidivarin CBDV (16-2048) mg/kg Cannabidivarinic acid CBDVA (40-5120) mg/kg High-performance liquid chromatography-mass spectrometry (LC/MS) method	PB-ZA 55 issue 1 of 10.01.2023
Hemp oil	Cannabinoid content Range: Cannabidiol CBD (500-64000) mg/kg Cannabinol CBN (2,0-256) mg/kg Cannabigerol CBG (1,0-128) mg/kg Δ9-tetrahydrocannabinol Δ9 -THC (10-1218) mg/kg Δ9-tetrahydrocannabinolic acid Δ9-THCA (2,0-256) mg/kg Cannabidiolic acid CBDA (50-6400) mg/kg Cannabicyclol CBL (1,0-128) mg/kg Cannabidivarin CBDV (2,0-256) mg/kg Cannabidivarinic acid CBDVA (0,50-64) mg/kg Cannabichromene CBC (40-5120) mg/kg High-performance liquid chromatography-mass spectrometry (LC/MS) method	

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Cereals and cereal products	Glyphosate content Range: (0,10-40) mg/kg High-performance liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS)	PB-ZA 45 issue 3 of 17.03.2025

The Laboratory staff includes opinions and interpretations in the test reports from the Department of Food Safety and Chemical Analysis (ZA) with respect to the tests performed with the methods listed in column 3.

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Zakład Bezpieczeństwa i Analizy Chemicznej Żywności (ZA) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Agriculture products [E] Food [E]	Pesticide residue content Gas chromatography method with mass spectrometry (GC-MS) / tandem mass spectrometry (GC-MS/MS) detection	PN–EN 15662:2018-06
	Pesticide residue content Liquid chromatography method with mass spectrometry (LC-MS) / tandem mass spectrometry (LC-MS/MS) detection	

E – Flexible scope of accreditation. The flexibility of the scope covers the elements specified in document DA-10 for the scope of accreditation of testing laboratories.

List of activities carried out in the field of flexible scope of accreditation is made available by the accredited entity at the customer's request.

The Laboratory staff includes opinions and interpretations in the test reports from the Department of Food Safety and Chemical Analysis (ZA) with respect to the tests performed with the methods listed in column 3.

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Zakład Technologii Fermentacji (ZF) Grupa Problemowa ds. Technologii Wyrobów Spirytusowych (GS) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Spirits and spirituous beverages	Proof using electronic density analyser Range: (0-100)% vol. of ethyl alcohol at 20°C Oscillometric method	PN-A-79528-3:2007
	Acidity Range: (0,012-0,5) g/l alcohol 100 % vol. Titration method	PN-A-79528-7:2001 point 3.2
	Evaporation dry residue Range: (0,05-5) g/hl Weight method	PN-A-79529-19:2005
	Content of fermentation by-products Range: - acetaldehyde: (0,0016-1,60) g/l alcohol 100% vol. - ethyl acetate: (0,0009-1,80) g/l alcohol 100% vol. - methanol: (0,0016-1,60) g/l alcohol 100% vol. - n-propanol: (0,0012-2,40) g/l alcohol 100% vol. - i-butanol: (0,0009-2,40) g/l alcohol 100% vol. - i-amyl alcohol: (0,0013-3,20) g/l alcohol 100% vol. Gas chromatography method with flame ionisation detection (GC-FID)	PB-ZF/GS-01 issue 10 of 07.04.2025

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Alcohol beverages	Proof Range: (0,5-70) % vol. Oscillometric method	PN-A-79529-4:2005
	Content of extract Range: (0-500) g/l Oscillometric method	PN-A-79529-5:2005
	Content of reducing sugars after the inversion Range: (0,5-300,0) g/l Titration method	PN-A-79529-18:2005
Wine products	Density Range: (0,90-1,10) g/ml Oscillometric method	Regulation of MRiRW (Ministry of Agriculture and Rural Development) of June 25, 2022 (Journal of Laws of July 12, 2022, item 1469) Annex 1
	Ethyl alcohol content Range: (0,5-20) % vol. Oscillometric method	Regulation of MRiRW of June 25, 2022 (Journal of Laws of July 12, 2022, item 1469) Annex 2
	Content of total extract Calculation method based on the density of wine at 20 °C and the density of a water-alcoholic mixture with the same alcoholic strength as the wine being tested	Regulation of MRiRW of June 25, 2022 (Journal of Laws of July 12, 2022, item 1469) Annex 3
	Content of reducing sugars after inversion Range: (0,5-300,0) g/l Titration method	Regulation of MRiRW of June 25, 2022 (Journal of Laws of July 12, 2022, item 1469) Annex 4
	Total acidity Range: (0,5-10,0) g of tartaric acid/l Titration method	Regulation of MRiRW of June 25, 2022 (Journal of Laws of July 12, 2022, item 1469) Annex 6
	Volatile acidity Range: (0,009-6,0) g of acetic acid/l Titration method	Regulation of MRiRW of June 25, 2022 (Journal of Laws of July 12, 2022, item 1469) Annex 7

Zakład Technologii Przetworów Owocowych i Warzywnych (ZO) Pracownia Badania Jakości Fizykochemicznej i Sensorycznej (PBJFS) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Fruit, vegetable, and fruit-vegetable juices, nectars, beverages, syrups, purees	Vitamin C content (as L-ascorbic acid) Range: (1-130) mg/100 g Potentiometric titration method	PN-A-04019:1998, pkt. 2
Fruit, vegetable, and fruit-vegetable juices, nectars, purees **Non-alcoholic beverages**	Soluble solids content Range: (1,00-80,00)% w/w Refractometric method	PN-EN 12143:2000
	D-glucose and D-fructose content Range: (1,0-100,0) g/l Spectrophotometric method	PN-EN 1140:1999
	Sucrose content Range: (2,0-100,0) g/l Spectrophotometric method	PN-EN 12146:2001
	Titrable acidity Range: (2,00-40,0) g/l Potentiometric titration method	PN-EN 12147:2000
	Citric acid content (citrate) Range: (0,040-50,0) g/l Spectrophotometric method	PN-EN 1137:2000
	L-malic acid content Range: (0,20-10,00) g/l Spectrophotometric method	PN-EN 1138:2001
	Formol number Range: (1,0-30) ml 0,1 n NaOH/100 ml Potentiometric titration method	PN-EN 1133:1999
	Volatile acidity Range: (0,10-0,60) g/l Titration method (after distillation)	PN-A-75101-05:1990 item 2

The laboratory staff includes opinions and interpretations in the test reports from Department of Fruit and Vegetable Product Technology (ZO) - Laboratory of Physicochemical and Sensorial Quality (PBJFS) in the scope of tests completed with the methods listed in column 3.

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Fruit, vegetable, and fruit-vegetable juices, nectars, purees	D-isocitric acid content (isocitrate) Range: (50-300) mg/l Spectrophotometric method	PN-EN 1139:2000
	D- and L-lactic acid content Range: - D-lactic acid: (0,03-1,50) g/l - L-lactic acid: (0,08-1,50) g/l Spectrophotometric method	PN-EN 12631:2002
	pH value Scope: 3,00-4,50 Potentiometric method	PN-EN 1132:1999
	Ethyl alcohol content Range: (0,20-4,00) g/l Titration method (after distillation)	PN-A-75101-09:1990 item 2
Fruit, vegetable, and fruit-vegetable juices and nectars **Non-alcoholic beverages**	Relative density Range: 1,0000-1,1000 Oscillatory method	IFU No 1 A (issue of 2005) Relative Density (Method using density meter)

The laboratory staff includes opinions and interpretations in the test reports from Department of Fruit and Vegetable Product Technology (ZO) - Laboratory of Physicochemical and Sensorial Quality (PBJFS) in the scope of tests completed with the methods listed in column 3.

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Fruit and vegetable products: juices, nectars, syrups, non-carbonated drinks	Colour, odour, taste, appearance Range: 1,00-6,00 Point method	PB-ZO/PBJFS 24 issue 8 of 05.06.2025
Fruit and vegetable products: products in brine, dense and semi-dense products	Colour, odour, taste, appearance, consistence Range: 1,00-6,00 Point method	PB-ZO/PBJFS 24 issue 8 of 05.06.2025

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Zakład Technologii Piwa i Słodu (ZP) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Malt, barley	Nitrogen content Range: (1,2-2,5)% dry mass Total calculated protein content Titration method (Kjeldahl)	PB-ZP 01 issue 9 of 15.05.2025
Beer, wort	Total nitrogen content Range: (200-1500) mg/l Titration method (Kjeldahl)	PB-ZP 03 issue 10 of 15.05.2025
	Total protein (g/100 ml) Calculation method	
Hops and its products	Content of alfa- and beta-acids, and their components Range: - alfa acids (1-50)% - beta-acids (2-30)% High performance liquid chromatography with spectrophotometric detection (HPLC-UV)	PB-ZP 04 issue 9 of 15.05.2025
Malt	Moisture Range: (2,5-10)% Weight method	PN-A-79083-5:1998
	Extract content Range for flour, grist: (65,0-85,0)% dry mass Oscillometric method	PB-ZP 12 issue 7 of 15.05.2025
Hops, pellets	Moisture Range: (6,0-15)% Weight method	PB-ZP 09 issue 7 of 15.05.2025
Beer	Bittneres content Range: (2-80) unit of gentian (BU) Spectrophotometric method	PB-ZP 10 issue 8 of 15.05.2025
Beer, wort	Free amine nitrogen Range: - beer: (10-200) mg/l - wort: (20-350) mg/l Spectrophotometric method	PB-ZP 11 Issue 7 of 15.05.2025
Beer	Alcohol content, apparent extract, real extract Range: - alcohol: (0,2-7,5)% (w/w) - alcohol: (0,3-10,0)% (v/v) - apparent extract: (0,5-10,0)% (w/w) - real extract: (1,0-10,0)% (w/w) Oscillometric method (after distillation)	PB-ZP 13 issue 9 of 15.05.2025
	Alcohol (g/100 ml) Calculation method	

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Beer	Original extract content, apparent and real degree of fermentation Calculation method	PB-ZP 17 issue 6 of 15.05.2025
Beer	Alcohol content, apparent extract, real extract, original extract, apparent and real degree of fermentation Range: - alcohol: (0,3-10,0)% (v/v) - alcohol: (0,2-7,5)% (w/w) - apparent extract: (0,5-10,0)% (w/w) - real extract: (1,0-10,0)% (w/w) - original extract: (5,0-23,0)% (w/w) - apparent degree of fermentation: (5,0-100,0)% - real degree of fermentation: (5,0-90,0)% Near Infrared spectroscopy method (NIR)	PB-ZP 16 issue 8 of 15.05.2025
	Energy value (kJ/100 ml); (kcal/100 ml) Calculation method	
	Total acidity Range: (1,0-6,0) ml 1 M NaOH/100 ml Potentiometric titration method	PB-ZP 18 issue 5 of 15.05.2025
	pH Range: 3,00-5,00 Potentiometric method	PN-A-79093-4:2000
	Colour Range: (2-250) unit EBC Colorimetric method	PN-A-79093-5:2000
	Haze Range: (0,1-20) unit EBC Nephelometric method	PN-A-79093-9:2000 p.2. 2
Malt	Soluble protein content and Kolbach index Calculation method	PB-ZP 02 issue 10 of 15.05.2025

Zakład Mikrobiologii (ZM) Pracownia Badania Jakości Mikrobiologicznej (PBJM) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Fruits, vegetables, and fruit, vegetable, and vegetable-meat processing products **Cereals and cereal products** **Non-alcoholic beverages** **Dietary supplements** **Processing products made of eggs**	Total microbial count Pour plate method	PN-EN ISO 4833-1:2013-12+A1:2022-06
Fruits, vegetables, and fruit, vegetable, and vegetable-meat processing products **Ready-to-eat products**	Mesophilic lactic acid bacteria count Pour plate method	PN-ISO 15214:2002
Fruits, vegetables, and fruit, vegetable, and vegetable-meat processing products **Cereals and cereal products** **Processing products made of eggs** **Dietary supplements** **Ready-to-eat products** **Yeast slurry, brewer's spent grain** **Confectionery products** **Milk and milk products**	Presence of Salmonella spp. Enrichment method with biochemical and serological confirmation	PN-EN ISO 6579-1:2017-04+A1:2020-09
Fruits, vegetables, and fruit, vegetable, and vegetable-meat processing products **Ready-to-eat products** **Confectionery products**	Presence of Listeria monocytogenes Enrichment method with biochemical confirmation	PN-EN ISO 11290-1:2017-07
Fruits, vegetables, and fruit, vegetable, and vegetable-meat processing products **Cereals and cereal products** **Yeast slurry, wort stillage** **Dietary supplements** **Ready-to-eat products**	Presence of presumptive Escherichia coli Enrichment method with biochemical confirmation	PN-ISO 7251:2006

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Food with water activity higher than 0.95	Yeasts and moulds count Spread plate method	PN-ISO 21527-1:2009
Food with water activity lower or equal to 0.95	Yeasts and moulds count Spread plate method	PN-ISO 21527-2:2009
Fruit, vegetable, and fruit-vegetable processing products	Shelf life Thermostatic method	PN-A-75052-03:1990
Concentrated fruit juices **Fruit, vegetable juices** **Nectars, beverages** **Raw materials for beverage and juice manufacturing**	Presence of spore-forming thermo-acidophilic bacteria (Alicyclobacillus spp.) Enrichment method	IFU Method of Analysis No. 12 (2019) – procedure C
	Spore-forming thermo-acidophilic bacteria (Alicyclobacillus spp.) count Membrane filtration method	IFU Method of Analysis No. 12 (2019) – procedure B
	Presence of spore-forming thermo-acidophilic bacteria (Alicyclobacillus spp.) producing guaiacol Enrichment method with biochemical confirmation	IFU Method of Analysis No. 12 (2019) – procedure C
	Count of spore-forming thermo-acidophilic bacteria (Alicyclobacillus spp.) producing guaiacol Membrane filtration method with biochemical confirmation	IFU Method of Analysis No. 12 (2019) – procedure B
Concentrated Densified fruit juices, syrups, molasses	Osmophilic yeasts count Spread plate method	IFU Method No. 3 II, April 1996
Fruit processing products (juices, concentrated densified juices, pastes with pH< 4.3)	Total count of potential spoilaging microorganisms of fruit products Pour plate method	IFU Method No. 2, April 1996
Milk processing products **Baby food formula** **Dietary supplements** **Starter cultures** **Juices**	Presumptive Bifidobacterium spp. count Pour plate method	PN-ISO 29981:2012
Hemp	Total yeasts and moulds count (TYMC) Spread plate method	Polish Pharmacopoeia issue XIII 2023, p.2.6.12
	Total aerobic mesophilic count (TAMC) Pour plate method	

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Beer	Total aerobic count Spread plate method	PB-ZM/PBJM 03 issue 3 of 29.05.2024
	Total anaerobic count Spread plate method	
	Total aerobic count Membrane filtration method	PB-ZM/PBJM 01 issue 3 of 29.05.2024
	Total anaerobic count Membrane filtration method	
Sugar, semi-finished products in the sugar production process	Total mesophilic bacteria count Membrane filtration method	ICUMSA GS2/3-41 (2011)
	Slime-forming bacteria count Membrane filtration method	ICUMSA GS2/3-45 (2017)
	Yeasts and moulds count Membrane filtration method	ICUMSA G2/3-47 (2015)
	Thermophilic acidophilic bacteria (TAB) count Membrane filtration method	ICUMSA GS2/3-50 (2017)
	Presence of guaiacol producing TAB (GP-TAB) Membrane filtration method with biochemical confirmation	ICUMSA GS2/3-50 (2017)

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Zakład Mikrobiologii (ZM) Pracownia Badania Jakości Mikrobiologicznej (PBJM) Kolekcja Kultur Drobnoustrojów Przemysłowych (KKP) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Dietary supplements, of Saccharomyces cerevisiae var. boulardii yeasts preparations	Count of Saccharomyces cerevisiae Spread plate method with MALDI-TOF MS confirmation	PN-EN 15789:2022-04 PB-ZM/KKP 01 issue 1 of 10.01.2022
Dietary supplements, bacteria preparations	Count of Lactobacillus spp. Spread plate method with MALDI-TOF MS confirmation	PN-EN 15787:2022-04 PB-ZM/KKP 01 issue 1 of 10.01.2022

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Zakład Przetwórstwa Zbóż i Piekarstwa (ZZ) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Cereal grains **Cereal products**	Moisture Range: – cereal grains (9-20)% – cereal products (9-16)% Weight method	PN-EN ISO 712-1:2025-03
Cereal grains **Cereal products** **Pulses**	Nitrogen content by Kjeldahl method Range: – cereal grains (1,120-2,982)% d.m. – pulses (4,000-6,400)% – cereal products (1,053-3,200)% d.m. Titration method	PN-EN ISO 20483:2014-02
	Protein content (calculated)	
Wheat and rye grain **Wheat and rye flour** **Semolina**	Falling number Range (60-500) s Viscosimetric method	PN-EN ISO 3093:2010
Wheat grain **Wheat flour** **Semolina**	Gluten content Range: (14-40)% Weight method	PN-EN ISO 21415-2:2015-12
	Gluten index (calculated)	
Flour	Starch damage Amperometric method Range (4-34 UCD) UCDc (calculated)	PN-EN ISO 17715:2025:07
Wheat grain **Wheat flour**	Determination of the Alveograph properties Range: Parameter W (65-430 × 10^{-4}) J P/L index (0,35-4,2) Rheological method	PN-EN ISO 27971:2023-11
Cereal products	Fat acidity Range: (17-260) mg KOH/100 g d.m. (12-186) mg NaOH/100 g d.m. Titration method	PN-ISO 7305:2001
Cereal grains **Cereal products** **Pulses and by-products**	Ash Range: (0,35-5,50) % d.m. Weight method	PN-EN ISO 2171:2023-09

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Zakład Cukrownictwa (ZC) ul. Rakowiecka 36; 02 – 532 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
White sugar	Sugar colour insolution, IU_{420} Range: (2–50) units ICUMSA (IU_{420}) Spectrophotometric method	PN-A-74855-7:1998 PN-A-74855-7:1998/Az1:2005 ICUMSA GS2/3-10 (2011)
	Reflectance of white sugar Range:(0,01–6,00) colour-type Photometric method	ICUMSA GS2-13 (2011)
	Conductivity ash percentage Range:0,004–0,05)% m/m Conduktometric method	PN-A- 74855-8:1998 ICUMSA GS2/3/9-17 (2011)
	Turbidity Range: (2–100) units ICUMSA (IU_{420}) Spectrophotometric method	ICUMSA GS2/3-18 (2013)
	The determination of invert sugar Range: (0,002–0,050) % m/m Titrimetric method	ICUMSA GS2/3/9 – 5 (2011)
	The determination of moisture Range: (0,005–1,0)% m/m Gravimetric method	PN-A-74855-4:1996 Regulation of MRiRW (Ministry of Agriculture and Rural Development) of (Journal of Laws of 2004, no 37, item 334) Annex 6
	The determination of insoluble matter Range: (1,0–30,0) mg/kg Gravimetric method	ICUMSA GS2/3/9-19 (2007)
	Sulphite in white sugar Range: (0,03–15) mg/kg Spectrophotometric method	ICUMSA GS2-33 (2022)
	The determination of iron in sugar Range: (0,3–40) mg/kg Spectrophotometric method	ICUMSA GS2/3/7/8-31 (1994)
	Polarization Range: (99,5–100,1)°Z Polarimetric method	ICUMSA GS2/3-1 (2011)

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Molasses by-product in white sugar technology	Refractometic dry substance Range: (70–95) °Bx Refractometric method	ICUMSA GS4/3/8-13 (2009)
	Apparent sucrose content Range: (40–60) % m/m Polarimetric method	PB-ZC 1 issue 4 of 10.07.2025
	pH of the molasses solution Range: (2,00–12,00) Potentiometric method	ICUMSA GS1/2/3/4/7/8-23 (2009)
	The determination of reducing sugar Range: (0,03–2) % m/m Titrimetric method	PB-ZC 2 issue 4 of 10.07.2025
	The determination of total nitrogen Range: (1–5) % m/m Titrimetric method	PB-ZC 3 issue 4 of 10.07.2025
	The determination of sulfur dioxide Range: (0,001–1) % m/m Titrimetric method	PB-ZC 4 issue 4 of 10.07.2025
Beet pulp- product in white sugar technology	Dry substance content Range:(5–100)% m/m Gravimetric method	PN-R-64808:1985
	Sucrose content Range:(0,2–30)% m/m Polarimetric method	PN-R-64808:1985
	Ash content Range:(1–10)% m/m Gravimetric method	PB-ZC 5 issue 4 of 10.07.2025
	Protein content Range:(1–15)% m/m Titrimetric method	PB-ZC 6 issue 4 of 10.07.2025
Sugar beet	Polarization Range: (12–20)% m/m Polarimetric method	ICUMSA GS6-3 (2024)

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Zakład Koncentratów Spożywczych i Produktów Skrobiowych z siedzibą w Poznaniu (ZK) Pracownia Koncentratów Spożywczych (PK) ul. Starołęcka 40, 61-361 Poznań		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Cereal products, milk dietary supplements, food concentrates	Vitamin B_1 content (thiamine) Range: (0,03-5,0) mg/100g of the product High-performance liquid chromatography method with fluorescence detection (HPLC-FLD)	PB-ZK/PK 04 issue 9 of 03.09.2025
Food concentrates, fruit teas	Vitamin C content as the sum of L (+) ascorbic acid and dehydro L (+) ascorbic acid Range: (5-500) mg/100g of the product High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV)	PB-ZK/PK 05 issue 6 of 18.05.2023
Coffee and coffee products	Caffeine content Range: (0,01-5,0) g/100g of the product High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV)	ISO 20481:2008
Express teas (black, green, red), and fruit-herbal, herbal, Rooibos teas	Ash content Range: - total ash (2,0-12,0)%, - acid - insoluble ash: (0,05-3,0)% Weight method	PB-ZK/PK 02 issue 6 of 19.05.2023
Food concentrates	pH Range: 4,0-8,5 Potentiometric method	PN-A-79011-10:1998+Az1:2001
Black and green leaf tea (loose)	Total ash Range: (0,3-10,0)% Weight method	PN ISO 1575:1996
	Acid insoluble ash Range: (0,05-1,00)% Weight method	PN ISO 1577:1996
Tea	Weight loss determination Range: (0,1-15,0)% Weight method	PN ISO 1573:1996
Coffee	Weight loss determination Range: (0,2-10,0) g/100g Weight method	PN-ISO 11294:2002

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Zakład Koncentratów Spożywczych i Produktów Skrobiowych z siedzibą w Poznaniu (ZK) **Grupa Problemowa ds. Badań Sensorycznych (GBS)** ul. Starołęcka 40, 61-361 Poznań		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Food concentrates	Appearance, colour, odour - before preparation Descriptive method Appearance, odour, consistence, taste - after preparation Descriptive method 5- point method	PN-A-79011-2:1998 + Az1:2000 + Az2:2008

The Laboratory staff includes opinions and interpretations in the test reports from the Department of Food Concentrates and Starch Products in Poznań (ZK) - Group of Sensory Tests (GBS) for tests performed with the methods listed in column 3.

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Zakład Chłodnictwa i Jakości Żywności z siedzibą w Łodzi (ZJ) Pracownia Analiz Fizykochemicznych i Sensorycznych (PF) Al. Marszałka J. Piłsudskiego 84, 92-202 Łódź		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Delicatessen products	Water content Range: (20,0–90,0) % Weight method Dry matter content (calculated)	PN-A-82100:1985 p. 2.2
	Water content Range: (20,0–90,0) % Weight method Dry matter content (calculated)	PB-ZJ/PF 15 issue 3 of 31.07.2025
	Fat content Range: (0,3–70) % Extraction-weight method	PN-A-82100:1985 p. 2.3
	Nitrogen content Range: (0,08–3,2) % Titration method (Kjeldahl) Total protein (calculated)	PN-A-82100:1985 p. 2.4
Meat and meat products	Water content Range: (20,0–80,0) % Weight method	PN-ISO 1442:2000
	Water content Range: (20,0–80,0) % Weight method Dry matter content (calculated)	PB-ZJ/PF 15 issue 3 of 31.07.2025
	Free fat content Range: (0,3–60) % Extraction-weight method (Soxhlet)	PN-ISO 1444:2000
	Nitrogen content Range: (0,08–3,2) % Titration method (Kjeldahl) Total protein (calculated)	PN-A-04018:1975+Az3:2002

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Fruit and vegetable preserves	Total extract Range: (0,5–95,0) % Refractometric method	PN-A-75101-02:1990+Az1:2002
	Dissolved substances content Range: (0,2–95) % Refractometric method	PN-EN 12143:2000
	Total acidity Range: (0,11–5) % Titration method	PN-A-75101-04:1990+Az1:2002
	Total and reducing sugar content Range: (1,5–13,0) g/100ml Titration method (Lane – Eynon)	PN-A-75101-07:1990
Non-alcoholic beverages	Total extract Range: (0,5–95) % Refractometric method	PN-A-79033:1985 p. 3.6
	Total acidity Range: (0,02–0,45) % Titration method	PN-A-79033:1985 p. 3.8
	Total and reducing sugar content Range: (0,3–13,0) g/100ml Titration method (Lane – Eynon)	PN-A-75101-07:1990
Delicatessen products **Meat and meat products**	Ash content Range: (0,3–10) % Weight method	PN-ISO 936:2000
	Carbohydrate content (calculated) Energy value (calculated)	Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011, as amended
Meat and meat products **Fruits and vegetables and fruit and vegetable and vegetable and meat products** **Cereals and cereal products** **Delicatessen products**	Total fiber content Range: (0,2–75,0) % Enzymatic method	Technical brochure for the method AOAC985.29 (1997)
Carbonated soft drinks	Appearance/Clarity, Color, Odor, Taste, CO_2 saturation Simple descriptive test	PB-ZJ/PF 13 issue 4 of 31.07.2025
Non-carbonated soft drinks **Fruit, vegetable, fruit and vegetable juices**	Appearance/Clarity, Color, Odor, Taste Simple descriptive test	
Fruit, vegetable and fruit and vegetable preserves	Appearance and Consistency, Color, Odor, Taste Simple descriptive test	
Mayonnaise, mustard, dressing	Appearance and Consistency, Color, Odor, Taste Simple descriptive test	
Frozen and unfrozen delicatessen products, canned meat and vegetables	Before preparation Appearance, Odor After preparation Appearance and Consistency, Color, Odor, Taste Simple descriptive test	

Zakład Chłodnictwa i Jakości Żywności z siedzibą w Łodzi (ZJ) Pracownia Analiz Instrumentalnych (PI) Al. Marszałka J. Piłsudskiego 84, 92-202 Łódź		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Food concentrates **Meat and meat products** **Milk and dairy products** **Soft drinks** **Fruit and vegetables and fruit and vegetable and vegetable and meat products** **Fish and fish products** **Sweets and confectionery** **Herbal raw materials and products, spices** **Food for special nutritional purposes** **Oils, animal and vegetable fats** **Cereals and cereal products** **Frozen food** **Delicatessen products** **Dietary supplements**	Arsenic content Range: (0.01–10) mg/kg Electrothermal atomization atomic spectrometry (ETAAS) method	PB-ZJ/PI 11 issue 4 of 31.07.2025
	Metal content Cadmium (0,003–2,0) mg/kg Lead (0,020–10,0) mg/kg Copper (0,005–50,0) mg/kg Zinc (0,005–50,0) mg/kg Iron (0,01–500,0) mg/kg Flame atomic absorption spectrometry (FAAS) method	PN-EN 14082:2004
	Tin content Range: (0,4–200) mg/kg Flame atomic absorption spectrometry (FAAS) method	PB-ZJ/PI 01 issue 6 of 31.07.2025
	Mercury content Range: (0,001–5,0) mg/kg Atomic absorption spectrometry method with amalgamation technique	PB-ZJ/PI 02 issue 6 of 31.07.2025
	Content of benzoic acid and its salts Range: (3,0–5000) mg/kg (3,0–5000) mg/l Content of sorbic acid and its salts Range: (2,5–5000) mg/kg (2,5–5000) mg/l High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV)	PB-ZJ/PI 03 issue 7 of 31.07.2025
Beverages and aqueous solutions	Caffeine content Range: (5,0–1000) mg/l (0,5–100) mg/100ml High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV)	PB-ZJ/PI 03 issue 7 of 31.07.2025
	Acesulfam-K content Range: (2,5–2000) mg/l Aspartame content Range: (5,0–2000) mg/l High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV)	PN-EN 12856:2002

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Beverages and aqueous solutions **Preserved vegetables**	Saccharin content Range: (5,0–1000) mg/kg (5,0–1000) mg/l High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV)	PN-EN 12856:2002
Delicatessen products **Meat and meat products** **Fruit and vegetable products**	Nitrite content expressed as $NaNO_2$ Range: (1,0–500) mg/kg Nitrate content expressed as $NaNO_3$ Range: (10–5000) mg/kg Nitrate content expressed as KNO_3 (calculated) High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV)	PN-EN 12014-4:2006
Meat and meat products **Soft drinks** **Fruits and vegetables and fruit and vegetable and vegetable and meat products** **Cereals and cereal products** **Delicatessen products**	Sodium content Range: (5–30000) mg/kg Flame atomic absorption spectrometry (FAAS) method	PB-ZJ/PI 01 issue 6 of 31.07.2025
	Salt content (calculated)	Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011, as amended

Zakład Chłodnictwa i Jakości Żywności z siedzibą w Łodzi (ZJ) Pracownia Mikrobiologii (PM) Al. Marszałka J. Piłsudskiego 84, 92-202 Łódź		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Food concentrates **Meat and meat products** **Milk and dairy products** **Soft drinks** **Fruit and vegetables and fruit and vegetable and vegetable and meat products** **Fish and fish products** **Sweets and confectionery** **Herbal raw materials and products, spices** **Food for special nutritional purposes** **Oils, animal and vegetable fats** **Cereals and cereal products** **Frozen food** **Delicatessen products**	Number of moulds and yeasts Pour plate method	PN-ISO 7954:1999
	Presence of Salmonella spp. Culturing method with biochemical and serological confirmation	PN-EN ISO 6579-1:2017-04+A1:2020-09
	Number of Escherichia coli Pour plate method	PN-ISO 16649-2:2004
	Enumeration of coliform bacteria at 37ºC Pour plate method	PN-ISO 4832:2007
	Total microbial count Pour plate method	PN-EN ISO 4833-1:2013-12+A1:2022-06
	Presence of coliform bacteria Culturing method	PN-ISO 4831:2007
	Enterobacteriaceae count at 37ºC Pour plate method	PN-EN ISO 21528-2:2017-08
	Presence of Listeria monocytogenes Culturing method with biochemical confirmation	PN-EN ISO 11290-1:2017-07
	Number of Listeria monocytogenes Spread plate method	PN-EN ISO 11290-2:2017-07
	Number of coagulase-positive staphylococci (S. aureus and other species) Pour plate method	PN-EN ISO 6888-2:2022-03+A1:2024-02
	Number of mesophilic lactic acid bacteria Pour plate method	PN-ISO 15214:2002
Food concentrates **Meat and meat products** **Milk and dairy products** **Fruits and vegetables and fruit and vegetable products, vegetable and meat products, mushroom products** **Fish and fish products** **Sweets and confectionery** **Herbal raw materials and products, spices** **Food for special nutritional purposes** **Oils, animal and vegetable fats** **Cereals and cereal products** **Frozen food** **Delicatessen products**	Number of sulfate-reducing (IV) Clostridium spp. Horizontal method	PN-EN ISO 15213-1:2023-08
	Number of Clostridium perfringens Horizontal method	PN-EN ISO 15213-2:2024-05
	Water Activity Determination Range: 0,250–1,000 Dew Point Detection Method	PN-ISO 21807:2005

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Fruit, vegetable, vegetable-meat and mushroom preserves	Testing the durability of canned food Thermostat test method Culturing method	PN-A-75052-03:1990
Water for human consumption	Number of colonies on nutrient agar at 22ºC and 36ºC Pour plate method	PN-EN ISO 6222:2004
	Number of Escherichia coli and coliform bacteria Membrane filtration method	PN-EN ISO 9308-1:2014-12+A1:2017-04
	Number of Fecal Enterococci Membrane filtration method	PN-EN ISO 7899-2:2004

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Zakład Technologii Mięsa i Tłuszczu z siedzibą w Warszawie (ZMT) Pracownia Badania Żywności i Środowiska (PBŻiŚ) Zespół ds. Analiz Instrumentalnych (ZI) ul. Jubilerska 4, 04-190 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Meat and meat products **Milk and dairy products** **Vegetable and animal fats** **Delicatessen products** **Confectionery**	Cholesterol content Range: (1,0–270,0) mg/100g Sterol content: - Brassicasterol Range: (0,9–65,0) mg/100g - Campesterol Range: (0,9–240,0) mg/100g - Stigmasterol Range: (0,9–80,0) mg/100g - β-sitosterol Range: (0,9–350,0) mg/100g - δ5-avenasterol Range: (1,0–25,0) mg/100g Gas chromatography method with flame ionization detection (GC-FID)	PB-ZMT/PBŻiŚ 04 issue 8 of 30.05.2025
Animal raw materials and products **Milk and dairy products** **Vegetable and animal fats** **Oil seeds**	Content of benzo[a]pyrene, benzo[a]anthracene, chrysene and benzo[b]fluoranthene Range: Benzo[a]pyrene (0,30–25,00) µg/kg in product Benzo[a]anthracene (0,33–25,00) µg/kg in product Chrysene (0,33–25,00) µg/kg in product Benzo[b]fluoranthene *(0,35–25,00)* µg/kg in product High-performance liquid chromatography method with fluorescence detection (HPLC-FLD)	PB-ZMT/PBŻiŚ 07 issue 8 of 30.05.2025
Meat and meat products	Nitrite and nitrate content Range: (2–200) mg/kg High-performance liquid chromatography method with spectrophotometric detection (HPLC-UV) Sodium nitrite and sodium nitrate content Potassium nitrite and potassium nitrate content (calculated)	PB-ZMT/PBŻiŚ 11 issue 4 of 30.05.2025
Vegetable oils, fats, and animal fats (excluding fish oil) **Flavored oils**	Iodine value (calculated)	AOCS Cd 1c85:1997

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Meat and meat products **Milk and dairy products** **Vegetable and animal fats** **Oil seeds** **Confectionery** **Delicatessen products** **Fish and fish products** **Vegetables, fruits and their products** **Cereals and cereal products**	Fatty acid composition: Range: (0,1–99,0)% w/w C4:0 C6:0 C8:0 C10:0 C10:1 C11:0 C12:0 C12:1 C13:0 C13:1 C14:0 C14:1 C15:0 br C15:0 C15:1 C16:0 C16:1 C16:2 C16:3 C17:0 br C17:0 C17:1 C18:0 C18:1trans C18:1cis9 C18:1cis11 C18:1 c inne C18:2 trans C18:2 C18:3 trans C18:3 C18:2 c9t11 C18:4 C20:0 C20:1 C20:2 C20:3 n3 C20:3 n6 C20:4 C20:5 C22:0 C22:1 C22:4 C22:5 n3 C22:5 n6 C22:6 C24:0 C24:1 Gas chromatography method with flame ionization detection (GC-FID)	PB-ZMT/PBŻiŚ 05 issue 8 of 30.05.2025

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Meat and meat products **Milk and dairy products** **Vegetable and animal fats** **Oil seeds** **Confectionery** **Delicatessen products** **Fish and fish products** **Vegetables, fruits and their products** **Cereals and cereal products**	Total fatty acids (% w/w): - saturated - monounsaturated - polyunsaturated - trans - omega 3 - omega 6 - omega 9 (calculated)	PB-ZMT/PBŻiŚ 05 issue 8 of 30.05.2025
Confectionery **Dairy products** **Meat and meat products**	Fatty acid content (g/100g of product): - saturated - monounsaturated - polyunsaturated - trans - omega 3 - omega 6 - omega 9 (calculated)	PB-ZMT/PBŻiŚ 05 issue 8 of 30.05.2025
Vegetable and animal oils and fats	Acid value Range: (0.05–43.00) mg KOH / 1g product Acidity Range: (0,025–21,50) % Titrimetric method	PN-EN ISO 660:2021-03 pkt 9.3
	Peroxide value Range: (0,05–50,00) milliequivalents of O_2/kg of product Titrimetric method	PN-EN ISO 3960:2017-03
	Anisidine value Range: 0,05–30,00 Spectrophotometric method	PN-EN ISO 6885:2016-04

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Zakład Technologii Mięsa i Tłuszczu z siedzibą w Warszawie (ZMT) Pracownia Badania Żywności i Środowiska (PBŻiŚ) Zespół ds. Analiz Fizykochemicznych (ZCH) ul. Jubilerska 4, 04-190 Warszawa		
Test subject/product	**Type of operations/characteristics being tested/method**	**Reference documents**
Meat and meat products **Functional additives for meat production**	Free fat content Range: (0,5–60,0) % Gravimetric method (Soxhlet extraction)	PN-ISO 1444:2000
	Chloride content Range: (0,5–8,0) % Potentiometric titration method	PB-ZMT/PBŻiŚ 14 issue 3 of 30.05.2025
	Water/Dry matter content Range: (5,0–90,0) % Gravimetric method	PN-ISO 1442:2000
	Energy value (calculated)	Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011
	Water to protein ratio (calculated)	PN-ISO 1442:2000 PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025
Meat and meat products **Fish and fish products** **Milk and dairy products** **Cereals and cereal products** **Starch products** **Loose feed**	Nitrogen content Range: (0,5–7,0) % Titrimetric (Kjeldahl) method Protein content (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025
Confectionery	Total fat content Range: (1,0–36,0) % Gravimetric method (Soxhlet extraction)	PN-A-88021:1971
Dairy products and milk-based products	Total fat content Range: (1,0–42,0) % Gravimetric method (Soxhlet extraction)	PN-ISO 8262-3:2011
Meat products	Carbohydrate content Range: (0,5–20,0) % Titrimetric method Glucose content Range: (0,5–20,0) % Titrimetric method Starch content (calculated)	PB-ZMT/PBŻiŚ 09 issue 4 of 30.05.2025

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Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Meat and meat products	pH Range: 4,00-8,00 Potentiometric method	PN-ISO 2917:2001
	Total ash content Range: (0,5–10,0) % Gravimetric method	PN-ISO 936:2000
	Total phosphorus content as P_2O_5 Range: (0,5–10,0) g/kg Gravimetric method Added phosphorus content as P_2O_5 (calculated)	PN-A-82060:1999
	Hydroxyproline content Range: (0.020–0.900) % Spectrophotometric method	PN-ISO 3496:2000
	Collagen content (calculated)	PN-ISO 3496:2000 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011
	FE (Total meat protein [%]) (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025
	BE (Connective tissue protein [%]) (calculated)	PN-ISO 3496:2000 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011
	BEFFE (Meat protein excluding connective tissue proteins [%]) (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 3496:2000 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011
	BEFFE in FE (Ratio of meat protein excluding connective tissue protein to total meat protein) (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 3496:2000 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011
	BE in FE (Ratio of connective tissue protein to total meat protein) (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 3496:2000 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011

Test subject/product	Type of operations/characteristics being tested/method	Reference documents
Meat and meat products	FAT/FE (Fat to total protein ratio) (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 1444:2000
	K/B (Collagen to total protein ratio [%]) (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 3496:2000 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011
	PFF factor [%] (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 1444:2000
	Estimated meat content [%] (calculated)	PN-ISO 1444:2000 PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 3496:2000 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011
	W/FE (Water to total meat protein ratio) (calculated)	PB-ZMT/PBŻiŚ 10 issue 4 of 30.05.2025 PN-ISO 1442:2000

Wykaz zmian
Zakresu Akredytacji Nr AB 452

List of changes of the scope of accreditation No AB 452

Status zmian:
Status of changes:

Numer strony Page number	Aktualna wersja strony Valid page version	Zastępuje wersję strony Replaces page version	Data zmiany Date of change
18/39	**B**	**A**	**17.04.2026 r.**
22/39	**B**	**A**	**17.04.2026 r.**
27/39	**B**	**A**	**17.04.2026 r.**
29/39	**B**	**A**	**17.04.2026 r.**
31/39	**B**	**A**	**17.04.2026 r.**

Zatwierdzam status zmian

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