

## SPECIFICAȚII TEHNICE (F4.1)

Numărul procedurii de achiziție: 21036529 din 12.03.2021

Denumirea procedurii de achiziție: Reactivi și consumabile pentru laboratorul de analize fizico-chimice

Nr. d/o	Codul CPV	Denumirea bunurilor și specificația tehnică deplină solicitată	Modelul articolu- lui	Țara de origine	Producătorul	Specificarea tehnică deplină	Specificarea tehnică deplină propusă de către ofertant	Standar-de de referință
1	33140000-3	Silver nitrate	10220-100G	Germania	Sigma Aldrich	99,0-100,5%; white or almost white, crystalline powder or transparent, colourless crystals; very soluble in water, soluble in ethanol (96 per cent); Foreign salts: max. 0.3%; Aluminium, lead, copper and bismuth- comply Ph.Eur.; Storage: in a non-metallic container, protected from light. Ambalaj: 100g.	Silver nitrate meets analytical specification of Ph. Eur., BP, USP, 99.8-100.5% amb.100G	ISO
2	33140000-3	Tetramethylammonium hydroxide pentahydrate	T7505-25G	Germania	Sigma Aldrich	for HPLC. Ambalaj: 50 g.	Tetramethylammonium hydroxide pentahydrate ≥97% amb.25G	ISO
3	33140000-3	Nickel-aluminium alloy	72240-100G	Germania	Sigma Aldrich	contains 50% Al, 50% Ni. Ambalaj: 5g.	Aluminum-nickel alloy purum, 50% Al basis, 50% Ni basis amb.100G	ISO
4	33140000-3	Mercuric thiocyanate	83374-5G	Germania	Sigma Aldrich	conform Ph.Eur. Ambalaj: 5g	Mercury(II) thiocyanate purum p.a., ≥95.5% (complexometric) amb.5G	ISO
5	33140000-3	Potassium dihydrogen phosphate anhydrous	04243-1KG	Germania	Sigma Aldrich	conform Ph.Eur; 98,0-100,5%(dried substance); Cloruri: max.200ppm; Sulfăți: max.300ppm; Arsenic: max.2ppm; Fier: max.10ppm; Pierdere prin uscare: max.2,0%; Ambalaj: 1 kg.	Potassium phosphate monobasic meets analytical specification of Ph. Eur., NF, E340, anhydrous, 98-100.5% (calc. to the dried substance) amb. 1KG	ISO
6	33140000-3	Sodium dihydrogen phosphate dihydrate	04269-1KG	Germania	Sigma Aldrich	conform Ph.Eur; 98.0 % to 100.5 % (dried substance); Cloruri: max.200ppm; Sulfăți: max.300ppm; Arsenic: max.2ppm; Fier: max.10ppm; Pierdere prin uscare: 21,5-24,0%; Ambalaj: 1 kg.	Sodium phosphate monobasic dihydrate meets analytical specification of Ph. Eur., BP, USP, FCC, E 339, 98-100.5% (calc. to the dried substance) amb. 1KG	ISO
7	33140000-3	Formic acid	27001-1L-R	Germania	Sigma Aldrich	conform Ph.Eur.; 98.0 % m/m to 100.5% m/m; Chlorides: maximum 10 ppm; Sulfates: maximum 50 ppm.; Sulfites: maximum 300 ppm.; Residue on evaporation: maximum 0.01%. Ambalaj: 1 L.	27001-1L-R	ISO

8	33140000-3	Dichloromethane	32222-2.5L	Germania	Sigma Aldrich	conform Ph.Eur.; Residue on evaporation: maximum 20 ppm; Water: maximum 0.02 % m/m. Ambalaj: 2,5 L.	Dichloromethane puriss. p.a., ACS reagent, reag. ISO, ≥99.9% (GC) amb. 2,5L	ISO
9	33140000-3	Tetrabutylammonium hydroxide	86854-100ML	Germania	Sigma Aldrich	40% solution in water; for HPLC. Ambalaj: 100 ml.	Tetrabutylammonium hydroxide solution ~40% in water, for ion chromatography amb. 100 ML	ISO
10	33140000-3	Tetrabutylammonium hydroxide	A12626-100ML	Germania	Sigma Aldrich	40% sol. in methanol; for HPLC. Ambalaj: 100 ml.	Tetra-n-butylammonium hydroxide, 40% w/w in methanol amb. 100 ML	ISO
11	33140000-3	Ammonium iron(III) sulfate dodecahydrate (Ferric ammonium sulfate)	F3629-500G	Germania	Sigma Aldrich	conform Ph.Eur.; 99+%; Ambalaj: 0,5 kg.	Ammonium iron(III) sulfate dodecahydrate ReagentPlus®, ≥99% amb.500G	ISO
12	33140000-3	Acetic acid glacial	33209-2.5L	Germania	Sigma Aldrich	99-100,5% m/m; Reducing substances-comply Ph.Eur.; Chlorides- max.25mg/L; Sulfates- max.50mg/L; Iron- max.5ppm; Residue on evaporation: max. 0.01%; Ambalaj: 2,5L.	Acetic acid glacial, puriss. p.a., ACS reagent, reag. ISO, reag. Ph. Eur., ≥99.8% amb. 2,5L	ISO
13	33140000-3	Sulfuric acid	30743-1L-GL	Germania	Sigma Aldrich	purity: 95.0 % m/m to 97.0 % m/m; Chlorides: max. 0.5 ppm; Nitrates: max. 0.5 ppm; Ammonium: max.2 ppm; Arsenic: max. 0.02 ppm; Iron: max. 1 ppm; Heavy metals: max. 2 ppm; Residue on ignition: max. 0.001%. Ambalaj: 1L.	Sulfuric acid puriss. p.a., for determination of Hg, ACS reagent, reag. ISO, reag. Ph. Eur., 95.0-97.0% amb. 1L	ISO
14	33140000-3	Acetic anhydride	33214-1L	Germania	Sigma Aldrich	puriss. p.a., reag. Ph. Eur.; ≥99%; Ambalaj: 1L.	Acetic anhydride puriss. p.a., ACS reagent, reag. ISO, reag. Ph. Eur., ≥99% (GC) amb. 1L	ISO
16	33140000-3	Sodium hydroxide	30620-1KG-R	Germania	Sigma Aldrich	Conform Ph.Eur.; Content: 97.0 to 100.5%; (CO32-)-max. 2.0%; (Cl-)-max. 200ppm; (SO42-)-max. 200ppm; (Fe)-max. 10ppm; Ambalaj: 1 kg.	Sodium hydroxide puriss. p.a., ACS reagent, reag. Ph. Eur., K ≤0.02%, ≥98%, pellets amb. 1KG	ISO
17	33140000-3	4-aminobenzoic acid	A9878-100G	Germania	Sigma Aldrich	conform Ph.Eur; 99.0 % to 101.0 % (anhydrous substance); Iron: maximum 40 ppm; Water: maximum 0.2%; Sulfated ash: maximum 0.1%. Ambalaj: 100 g.	4-Aminobenzoic acid ReagentPlus®, ≥99% amb.100G	ISO
18	33140000-3	Trichloroacetic acid	91230-100G	Germania	Sigma Aldrich	conform PhEur; 98.0 % to 100.5%; Chlorides: maximum 100 ppm; Sulfated ash: maximum 0.1%. Ambalaj: 100 g.	Trichloroacetic acid ACS reagent, for the determination of Fe in blood according to Heilmeyer, ≥99.5% amb.100G	ISO
20	33140000-3	Ammonia solution, concentrated	30501-1L-GL	Germania	Sigma Aldrich	conform PhEur; Content: 25.0 per cent m/m to 30.0 per cent m/m; Oxidisable substances-comply PhEur; Pyridine and related substances: maximum 2 ppm, calculated as pyridine; Carbonates: maximum 60 ppm; Chlorides: maximum 1 ppm; Sulfates: maximum 5 ppm; Iron: maximum 0.25 ppm; Residue on evaporation: maximum 20 mg/L. Ambalaj: 1 L.	Ammonium hydroxide solution puriss. p.a., reag. ISO, reag. Ph. Eur., ~25% NH3 basis amb. 1L	ISO

21	33140000-3	Ammonium chloride	31107-500G	Germania	Sigma Aldrich	conform PhEur; 99.0 % to 100.5 % (dried substance); Bromides and iodides: comply; Sulfates: maximum 150 ppm; Calcium: maximum 200 ppm; Iron: maximum 20 ppm; Loss on drying: maximum 1.0%; Sulfated ash: maximum 0.1%. Ambalaj: 500 g.	Ammonium chloride puriss. p.a., ACS reagent, reag. ISO, reag. Ph. Eur., ≥99.5% amb.500G	ISO
22	33140000-3	2,2,4-Trimethylpentane	258776-1L	Germania	Sigma Aldrich	conform Ph.Eur. Ambalaj: 1 L.	2,2,4-Trimethylpentane ReagentPlus®, ≥99% amb. 1L	ISO
23	33140000-3	Dimethylformamide	33120-2.5L-R	Germania	Sigma Aldrich	Purity ≥99.8%; Water: max. 0.1%; RESIDUE (EVAPORATION) ≤ 0.001 %; Ambalaj: 2,5L.	N,N-Dimethylformamide puriss. p.a., ACS reagent, reag. Ph. Eur., ≥99.8% (GC) amb. 2,5L	ISO
24	33140000-3	Potassium bromide	243418-100G	Germania	Sigma Aldrich	Gradul reagent, reag. Ph. Eur. Ambalaj: 100 g.	Potassium bromide ACS reagent, ≥99.0% amb.100G	ISO
25	33140000-3	Glycerol	49779-1L	Germania	Sigma Aldrich	conform Ph.Eur.; 98.0 % m/m to 101.0 % m/m (anhydrous substance); Aldehydes: maximum 10 ppm; Halogenated compounds: maximum 35 ppm; Chlorides: maximum 10 ppm; Water: maximum 2.0%; Sulfated ash: maximum 0.01%. Ambalaj: 1 L.	Glycerol tested according to Ph. Eur., anhydrous amb. 1L	ISO
26	33140000-3	Tetrahydrofuran	34865-2.5L	Germania	Sigma Aldrich	for HPLC; Clear, colourless, flammable liquid, miscible with water, with ethanol (96 per cent); Content: ≥99.8%; Test for peroxides-comply. Ambalaj: 1,0 L.	Tetrahydrofuran inhibitor-free, for HPLC, ≥99.9% amb. 2,5L	ISO
27	33140000-3	Formaldehyde	15512-1L-R	Germania	Sigma Aldrich	reag PhEur; 34.5 % m/m to 38.0 % m/m; Sulfated ash: max. 0.1%. Ambalaj: 1 L.	Formaldehyde solution meets analytical specification of USP, ≥34.5 wt. % amb. 1L	ISO
28	33140000-3	Hexane for HPLC, GC	34859-2.5L	Germania	Sigma Aldrich	≥98,0% (GC), gradul: pentru HPLC; impurități: ≤0,0005% substanțe nevolatile; ≤0,001% acid liber (ca CH <sub>3</sub> COOH); ≤0,01% apă (prin Karl Fischer);reziduu după evaporare: ≤ 1 mg/l; aciditate:≤ 0.0002 meq/g; alcalinitate: ≤ 0.0002 meq/g; indice de refracție n <sub>20</sub> /D: 1,375;densitate: 0,66 g/mL (la 20 °C); transmitanță la 210 nm: ≥50%; la 220nm: ≥85%; la 245nm: ≥98%. Temperatura de fierbere: 69 °C; Temperatura de topire: – 94,3 °C;UV absorbție (referință: apă):la 200 nm: Amax: ≤0.70, la 225 nm: Amax: ≤0.10, la 250 nm: Amax: ≤0.01. Ambalaj: 2,5 L	Hexane suitable for HPLC, ≥97.0% (GC) amb. 2,5L	ISO
29	33140000-3	Tetrakis(decyl)ammonium bromide	87578-50G-F	Germania	Sigma Aldrich	for HPLC. Ambalaj: 100 g.	Tetrakis(decyl)ammonium bromide suitable for ion pair chromatography, LiChropur™, ≥99.0% (AT) amb.50G	ISO
30	33140000-3	Propanol-2	34863-1L	Germania	Sigma Aldrich	CAS-[67-63-0]. indice de refracție: about 1.378; Water: max. 0.05%; Absorbance: max. 0.60 at 210 nm, 0.26 at 220 nm, 0.13 at 230 nm, 0.02 at 250 nm, 0.01 at 260 nm, determined using water R as compensation liquid; Acidity or alkalinity: Ph.Eur. Coresp.; Ambalaj: 1L.	2-Propanol suitable for HPLC, 99.9% amb. 1L	ISO

31	33140000-3	Sodium periodate	30323-100G	Germania	Sigma Aldrich	min.99.0%. Ambalaj: 50 g.	Sodium (meta)periodate puriss. p.a., ACS reagent, reag. Ph. Eur., ≥99.8% amb.100G	ISO
32	33140000-3	Disodium tetraborate decahydrate	31457-500G	Germania	Sigma Aldrich	conform Ph.Eur.; 99.0% to 103.0% of Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10H <sub>2</sub> O; Sulfates: maximum 50 ppm; Ammonium: maximum 10 ppm; Arsenic: maximum 5 ppm; Calcium: maximum 100 ppm; Ambalaj: 500 g.	Sodium tetraborate decahydrate puriss. p.a., ACS reagent, reag. ISO, buffer substance, ≥99.5% amb.500G	ISO
36	33140000-3	Phosphoric acid	30417-1L	Germania	Sigma Aldrich	84,0-90,0% m/m; Cloruri: max.50 ppm; Sulfati: max.100ppm; Arsenic: max.2ppm; Fier: max.50ppm; conform Ph.Eur. Ambalaj: 1 L.	Phosphoric acid puriss. p.a., ACS reagent, reag. ISO, reag. Ph. Eur., ≥85% amb. 1L	
40	33140000-3	Sodium hexanesulfonate monohydrate	52862-50G-F	Germania	Sigma Aldrich	min. 99,0%; for chromatography; Ambalaj: 50g.	Sodium 1-hexanesulfonate monohydrate suitable for ion pair chromatography, LiChropur™, ≥99.0% (T) amb.50G	
41	33140000-3	Octanesulfonic acid sodium salt monohydrate	74882-50G-F	Germania	Sigma Aldrich	conform Ph.Eur.; min.98,0%; Absorbance: max.0,10 la 200nm, 0,01 la 250nm; Suitable for HPLC; Ambalaj: 50 g.	Sodium 1-octanesulfonate monohydrate suitable for ion pair chromatography, LiChropur™, ≥99.0% (T) amb.50G	
42	33140000-3	Sodium heptanesulfonate monohydrate	51835-50G	Germania	Sigma Aldrich	Content: min.96% (anhydrous substance). White or almost white, crystalline powder, soluble in water, very slightly soluble in anhydrous ethanol; Water: maximum 8%; Ambalaj: 25g.	Sodium 1-heptanesulfonate monohydrate ≥96.0% (T) amb.50G	
43	33140000-3	Ammonium acetate	17836-250G	Germania	Sigma Aldrich	for HPLC. Ambalaj: 0,5 kg.	Ammonium acetate, for HPLC, ≥99.0% amb.250G	
44	33140000-3	Ammonium acetate	32301-1KG	Germania	Sigma Aldrich	reagent Ph.Eur.; ≥98,0%; water: ≤ 2,0%; cloruri: max.5ppm; nitrați: max.10ppm; sulfati: max.10ppm; metale grele: max.5 ppm; ign. residue ≤0.01%; reducing substances: max.0,005%; Ambalaj: 0,5 kg.	Ammonium acetate puriss. p.a., ACS reagent, reag. Ph. Eur., ≥98% amb. 1KG	
45	33140000-3	Tetrabutylammonium hydrogen sulfate	86853-50G-F	Germania	Sigma Aldrich	for HPLC; extra pure; Absorbance: : max. 0.02, between 215 nm and 300 nm; Ambalaj: 50g.	Tetrabutylammonium bisulfate suitable for ion pair chromatography, LiChropur™, ≥99.0% amb.50G	
47	33140000-3	Buffer solution pH 4.01	B5020-500ML	Germania	Sigma Aldrich	pH 4,01 (25°C). Ambalaj: 0,5 L.	Buffer, reference standard pH 4.00±0.01 (25 °C) amb. 500 ML	ISO
48	33140000-3	Buffer solution pH 10.01	B4895-500ML	Germania	Sigma Aldrich	pH 10,01 (25°C). Ambalaj: 0,5 L.	Buffer, reference standard pH 10.00±0.01 (25 °C) amb. 500 ML	ISO
49	33140000-3	Buffer solution pH 7.00	B4770-500ML	Germania	Sigma Aldrich	pH 7,00 (25°C). Ambalaj: 0,5 L.	Buffer, reference standard pH 7.00±0.01 (25 °C) amb. 500 ML	ISO
53	33140000-3	Polyamide-6	181110-25G	Germania	Sigma Aldrich	tip IIA6-210/310 sau IIA6-120/321. Ambalaj: 100g.	Nylon 6 pellets amb.25G	ISO
54	33140000-3	(+)-Isomenthone.	PHL89328-100MG	Germania	Sigma Aldrich	Conform Ph.Eur. A colourless liquid, very slightly soluble in water, soluble in ethanol (96%). density: about 0.904 ;refractive index: about 1.453; optical activity: about + 93.2. Suitable for Gas chromatografy; Content: minimum 80.0%, calculated by the normalisation procedure. Ambalaj: 1ml.	Isomenthone phyproof® Reference Substance amb.100MG	ISO

55	33140000-3	Sabinene	PHL82342-100MG	Germania	Sigma Aldrich	Conform Ph.Eur.: A colourless, oily liquid, suitable for Gas chromatography. Content: minimum 95.0%, calculated by the normalisation procedure. Ambalaj: 1ml.	Sabinene phyproof® Reference Substance amb.100MG	ISO
56	33140000-3	Piperitone	PHL82627-100MG	Germania	Sigma Aldrich	mixture of enantiomers, suitable for GC. Ambalaj: 1ml.	Piperitone phyproof® Reference Substance amb.100MG	ISO
59	33140000-3	Uracil	PHR1581-100MG	Germania	Sigma Aldrich	Reagent Ph. Eur., ≥99.0%, pharmaceutical secondary standard; numărul CAS: 66-22-8; temperatura de topire: >300 °C;	Uracil Pharmaceutical Secondary Standard; Certified Reference Material amb.100MG	ISO
62	33140000-3	4-Cl-nitrobenzene	C59122-100G	Germania	Sigma Aldrich	Reagent Ph. Eur., ≥99.0%, CAS: 100-00-5; densitate: 1.298 g/mL (20 °C); temperatura de topire: 80-83 °C; temperatura de fierbere: 242 °C; ambalaj:10 g	1-Chloro-4-nitrobenzene 99% <b>amb.100G</b>	ISO
71	33140000-3	Pipete gradate cu volumul 5ml, clasa AS	021.05.005	Germania	Isolab	Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN (forgraduated pipettes) standards. Clasa AS	Pipete gradate cu volumul 5ml, clasa AS	ISO
72	33140000-3	Pipete gradate cu volumul 4,5ml, clasa AS	021.05.005	Germania	Isolab	Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN (forgraduated pipettes) standards. Clasa AS	Pipete gradate cu volumul 5ml, clasa AS	ISO
73	33140000-3	Pipete gradate cu volumul 10,0ml, clasa AS	021.05.010	Germania	Isolab	Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN (forgraduated pipettes) standards. Clasa AS	Pipete gradate cu volumul 10,0ml, clasa AS	ISO
74	33140000-3	Pipete gradate cu volumul 9,5 ml, clasa AS	021.05.010	Germania	Isolab	Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN (forgraduated pipettes) standards. Clasa AS	Pipete gradate cu volumul 10,0ml, clasa AS	ISO
75	33140000-3	Pipete gradate cu volumul 2ml, clasa AS	021.05.002	Germania	Isolab	Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN (forgraduated pipettes) standards. Clasa AS	Pipete gradate cu volumul 2ml, clasa AS	ISO
76	33140000-3	Pipete gradate cu volumul 1,9 ml, clasa AS	021.05.002	Germania	Isolab	Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN (forgraduated pipettes) standards. Clasa AS	Pipete gradate cu volumul 1,9 ml, clasa AS	ISO

77	33140000-3	Pipete gradate cu volumul 1ml, clasa AS	021.05.001	Germania	Isolab	Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN (for graduated pipettes) standards. Clasa AS	Pipete gradate cu volumul 1ml, clasa AS	ISO
85	33140000-3	Vata	8551	Moldova	Sarma	Ambalaj 100 g	Vată de bumbac, Ambalaj -100 gr	ISO CE
97	33140000-3	Eprubete	077.01.005	Germania	Isolab	material: sticlă incoloră, transparentă, neutrală. 16x160 mm , neutral glass test tubes (077.01.005)	material: sticlă incoloră, transparentă, neutrală. 16x160 mm , neutral glass test tubes (077.01.005)	ISO
100	33140000-3	Termometru p/u frigider din sticla	12004191	Rusia	Minimed	p/u frigider, t= -30°C - +30°C diviziunea 0,5 sau 0,1 cu certificat etalonare	p/u frigider, t= -30°C - +30°C diviziunea 1°C cu certificat etalonare	ISO

Semnăt: \_\_\_\_\_

Valabilitatea ofertei: 60 zile

Numele, Prenumele: **Michiciuc Gheorghe**

12.03.2021

În calitate de: **Director**

Oferatntul: **SRL «Mic — Tan»**

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