

	<b>COOMET Program</b>	<b>COOMET P5/2020</b>
	<b>Program of Joint CRM Production within COOMET</b>	
<i>Agreed at the 25<sup>th</sup> meeting of TC 1.12 "Reference Materials" into online format (10 September 2020). Approved at the 30<sup>th</sup> online COOMET Committee meeting (24 September 2020)</i>		

**PROGRAM  
OF JOINT CRM PRODUCTION  
WITHIN COOMET**

*As of 14 September 2020  
(COOMET Project 186/RU/99)*

Ind .NN	Country, CRM producer, contact person	Project	Certified characteristics	Planned values (range) of certified characteristics	Period of CRM development	Notes
1	2	3	4	5	6	7
<b>Part 1 ( projects for which the forms of Proposed (P) or Agreed (A) Projects are prepared)</b>						
1.	<b>Russia</b> All-Russian Research Institute for Petroleum Refining (OJSC “VNII NP”) Moscow Contact Person: Irina V. Tereshina Head of Metrological Research Laboratory Tel:(495)788-1553, 787-48-87, ext.1367 E-mail: metrology@vniinp.ru  Scientific and Production Association “INTEGRSO” Ufa Anvar H. Muhamedzyanov General Director Tel. (347) 275-31-38 (347) 270-86-13, 8-901-813-75-29 E-mail: <a href="mailto:integrso@mail.ru">integrso@mail.ru</a>	Development of CRMs of ultimate temperature of diesel fuel filterability on a cold filter (2 types) <b><u>537/RU/11 (P)</u></b>	Ultimate temperature of filterability on a cold filter, °C  CRM PTF DT -1 CRM PTF DT -2	0 – minus 20° C minus 20 – minus 40° C	<b>2021</b>	Participants of work: <b>1. Belarus</b> - OJSC “Naphtan”; - OJSC “Mozyr Petroleum Processing Plant”; <b>2. Kazakhstan</b> West-Kazakhstan JSC “NaTsEkS” <b>3. Ukraine</b> - OJSC “NPK-Galichina”;
2.		Development of CRMs of lead concentration in motor petrol (4 types) <b><u>538/RU/11 (P)</u></b>	Lead concentration, mg/dm <sup>3</sup>  CRM KSB-1 CRM KSB-2 CRM KSB-3 CRM KSB-4	0 - 0,1; 2,0 - 3,0; 4,0 - 7,0; 8,0 - 10,0.	<b>2021</b>	Participants of work: <b>1. Belarus</b> - OJSC “Naphtan” - OJSC “Mozyr Petroleum Processing Plant” <b>2. Kazakhstan</b> - JSC “KazMunaiGas Onimderi”; <b>3. Lithuania</b> - State Scientific and Research Centre of Physical and Technological Sciences <b>4. Ukraine</b> - OJSC “NPK-Galichina”;
3.		Development of CRMs of iron concentration in motor petrol (4 types) <b><u>539/RU/11 (P)</u></b>	Mass concentration of iron, mg/dm <sup>3</sup>  CRM MKJ-1 CRM MKJ-2 CRM MKJ-3 CRM MKJ-4	0 - 3; 3 - 8; 8 - 15; 15 - 25.	<b>2021</b>	Participants of work: <b>1. Belarus</b> - OJSC “Naphtan” - OJSC “Mozyr Petroleum Processing Plant” <b>2. Lithuania</b> - State Scientific and Research Centre of Physical and Technological Sciences <b>3. Ukraine</b> - OJSC “NPK-Galichina”;

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4.	<p><b>Russia</b> Federal State Budgetary Enterprise of Science A.P. Vinogradov Geochemistry Institute Siberian Branch of Russian Academy of Sciences</p> <p>1a, Favorsky Str. Irkutsk, 664033</p> <p>Contact Person: Irina E. Vasilieva Head of Laboratory of Optical Spectral Analysis and Reference Materials E-mail: <a href="mailto:vasira@igc.irk.ru">vasira@igc.irk.ru</a> Tel./fax: +7 (3952) 42 58 37 Mob.: +7 964 226 4811</p>	<p>Development of CRM for composition of wolframite hubnerite concentrate (hard- alloy) – KVG(T)</p> <p><b><u>617/RU/13 (A)</u></b></p>	<p>Mass fraction of elements, %</p> <p>Tungsten Manganese Aluminium Beryllium Vanadium Bismuth Iron Gold Yttrium Cadmium Calcium Silicon Copper Molybdenum Arsenic Niobium Tin Lead Sulphur Silver Scandium Antimony Titanium Uranium Phosphor Fluoride Zinc Zirconium</p> <p><i>Note: Elements in bold are of the main interest during certification</i></p>	<p>45 – 50 10 – 12 0,7 – 1,0 0,0007 – 0,002 0,01 – 0,05 0,006 – 0,009 7,0 – 8,0 0,0005 – 0,003 0,002 – 0,005 0,001 – 0,0001 1,5 – 2,5 1,8 – 2,2 0,004 – 0,007 0,0015 – 0,003 0,00007 – 0,0007 0,02 – 0,10 0,02 – 0,04 0,06 – 0,08 0,15 – 0,20 0,0004 – 0,001 0,007 – 0,05 0,0001 – 0,003 3,3 – 4,0 0,001 – 0,003 0,001 – 0,05 0,3 – 0,4 0,015 – 0,025 0,007 – 0,03</p>	<p><b>2020</b></p>	<p>Participants of work:</p> <p><b>1.Belarus</b> <b>2.Bulgaria</b> GEOLAB Analytical Laboratory of Geological Institute BAN <b>3.Kazakhstan</b> - “Centrgeoanalyte, Ltd” - Riddersk mining and processing complex “Kazzinc, Ltd” - Central Chemical Laboratory of Balkhash region “Kazakhmys Corporation, Ltd.” <b>4. Uzbekistan</b> GP “Central Laboratory” of State Committee of Geology and Mineral Resources of the Republic of Uzbekistan, 64-a, N. KHodzhibaev Str., Tashkent, Head of laboratory KHamro Sabirov <a href="mailto:hsabirov@yandex.ru">hsabirov@yandex.ru</a></p>

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5.	<p><b>Russia</b>  FGUP "The Central Scientific  Research Institute of Geology of  Industrial Minerals  (FGUP "TsNIIgeolnerud")  4, Zinin Str. Kazan, the Republic  of Tatarstan, 420097  Alexander Smolkin  acting Head of the Director  тел.: +7 (843) 236-47-93  факс: +7 (843) 236-47-04  e-mail: <a href="mailto:root@geolnerud.net">root@geolnerud.net</a></p> <p>Contact person:  Olga M. Ilyicheva,  Head of the testing laboratory  "MinAnalyt"  tel./fax: +7 (843) 23-83-750,  E-mail: <a href="mailto:o.m.ilyicheva@gmail.com">o.m.ilyicheva@gmail.com</a></p>	Development of CRM for composition of quartz concentrate (QC of DODO deposit vein 233) – KK-233  <b><u>659/RU/15 (P)</u></b>	Mass fraction of elements:  Aluminium Titanium Calcium Magnesium Copper Manganese Sodium Potassium Lithium Phosphor Vanadium Chromium Nickel Zinc Cobalt Germanium Zirconium Cadmium Antimony Strontium Iron Barium Boron	Mass fraction, ppm  1-15 0,1-2,0 0,1-2,0 0,01-0,5 0,01-0,5 0,01-0,5 0,5-3,0 0,1-2,0 0,1-2,0 0,1-2,0 0,01-0,5 0,01-0,5 0,01-0,5 0,01-0,5 0,1-3,0 0,01-0,1 0,001-0,01 0,01-0,5 0,01-0,1 0,01-2,0 0,01-0,5 0,01-0,5	<b>2022</b>	Participation of all COOMET member-countries is desirable  Participants of work: <b>1. Belarus</b> - BelGIM; - Central laboratory of RUE "Belgeologiya" <b>2. Kazakhstan</b> <b>3. Kyrgyzstan</b> <b>4. Uzbekistan</b> GP "Central Laboratory" of State Committee of Geology and Mineral Resources of the Republic of Uzbekistan, 64-a, N. KHodzhibaev Str., Tashkent, Head of laboratory KHamro Sabirov <a href="mailto:hsabirov@yandex.ru">hsabirov@yandex.ru</a>

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6.	<p><b>Russia</b>  FGUP "The Central Scientific Research Institute of Geology of Industrial Minerals (FGUP "TsNIIgeolnerud")  4, Zinin Str. Kazan, the Republic of Tatarstan, 420097  Alexander Smolkin  acting Head of the Director  тел.: +7 (843) 236-47-93  факс: +7 (843) 236-47-04  e-mail: <a href="mailto:root@geolnerud.net">root@geolnerud.net</a></p> <p>Contact person:  Olga M. Ilyicheva,  Head of the testing laboratory "MinAnalyt"  tel./fax: +7 (843) 23-83-750,  E-mail: <a href="mailto:o.m.ilyicheva@gmail.com">o.m.ilyicheva@gmail.com</a></p>	Development of CRM for composition of quartz concentrate (QC of Vyazov deposit, vein 5) – KK-5  <b><u>660/RU/15 (P)</u></b>	Mass fraction of elements:  Aluminium Titanium Calcium Magnesium Copper Manganese Sodium Potassium Lithium Phosphor Vanadium Chromium Nickel Zinc Cobalt Germanium Zirconium Cadmium Antimony Strontium Iron Barium Boron	Mass fraction, ppm  1-15 1,0-5,0 0,05-2,0 0,01-2,0 0,01-0,5 0,01-0,5 0,1-3,0 0,1-3,0 0,1-2,0 0,01-1,0 0,01-0,5 0,01-0,5 0,01-0,5 0,01-0,5 0,01-0,5 0,1-3,0 0,01-0,1 0,005-0,05 0,01-0,5 0,01-0,5 0,05-2,0 0,01-0,5 0,01-0,5	<b>2022</b>	Participation of all COOMET member-countries is desirable  Participants of work: <b>1. Belarus</b> - BelGIM; - Central laboratory of RUE "Belgeologiya" <b>2. Kazakhstan</b> <b>3. Kyrgyzstan</b> <b>4. Uzbekistan</b> GP "Central Laboratory" of State Committee of Geology and Mineral Resources of the Republic of Uzbekistan, 64-a, N. KHodzhibaev Str., Tashkent, Head of laboratory KHamro Sabirov <a href="mailto:hsabirov@yandex.ru">hsabirov@yandex.ru</a>

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7.	<p><b>Russia</b>  FGUP "The Central Scientific Research Institute of Geology of Industrial Minerals (FGUP "TsNIIgeolnerud")  4, Zinin Str. Kazan, the Republic of Tatarstan, 420097  Alexander Smolkin  acting Head of the Director  тел.: +7 (843) 236-47-93  факс: +7 (843) 236-47-04  e-mail: <a href="mailto:root@geolnerud.net">root@geolnerud.net</a></p> <p>Contact person:  Olga M. Ilyicheva,  Head of the testing laboratory "MinAnalyt"  tel./fax: +7 (843) 23-83-750,  E-mail: <a href="mailto:o.m.ilyicheva@gmail.com">o.m.ilyicheva@gmail.com</a></p>	Development of CRM for composition of quartz concentrate (QC of Karayan deposit, vein 17) – KK -17  <b><u>661/RU/15 (P)</u></b>	Mass fraction of elements:  Aluminium Titanium Calcium Magnesium Copper Manganese Sodium Potassium Lithium Phosphor Vanadium Chromium Nickel Zinc Cobalt Germanium Zirconium Cadmium Antimony Strontium Iron Barium Boron	Mass fraction, ppm  0,1-10,0 0,5-5,0 0,01-2,0 0,01-0,5 0,01-0,5 0,01-0,5 0,1-3,0 0,05-2,0 0,01-2,0 0,01-2,0 0,01-0,5 0,01-0,5 0,01-0,5 0,01-0,5 0,01-1,0 0,01-0,5 0,1-3,0 0,01-0,5 0,005-0,05 0,01-0,5 0,01-0,5 0,1-3,0 0,01-0,5 0,01-0,5	<b>2022</b>	Participation of all COOMET member-countries is desirable  Participants of work: <b>1. Belarus</b> - BelGIM; - Central laboratory of RUE "Belgeologiya" <b>2. Kazakhstan</b> <b>3. Kyrgyzstan</b> <b>4. Uzbekistan</b> GP "Central Laboratory" of State Committee of Geology and Mineral Resources of the Republic of Uzbekistan, 64-a, N. KHodzhibaev Str., Tashkent, Head of laboratory KHamro Sabirov <a href="mailto:hsabirov@yandex.ru">hsabirov@yandex.ru</a>

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8.	<p><b>Russia</b>  FGUP “The Central Scientific Research Institute of Geology of Industrial Minerals (FGUP “TsNIIgeolnerud”) 4, Zinin Str. Kazan, the Republic of Tatarstan, 420097  Alexander Smolkin  acting Head of the Director  тел.: +7 (843) 236-47-93  факс: +7 (843) 236-47-04  e-mail: <a href="mailto:root@geolnerud.net">root@geolnerud.net</a></p> <p>Contact person:  Olga M. Ilyicheva,  Head of the testing laboratory “MinAnalyt”  tel./fax: +7 (843) 23-83-750,  E-mail: <a href="mailto:o.m.ilyicheva@gmail.com">o.m.ilyicheva@gmail.com</a></p>	Development of CRM for composition of quartz concentrate (QC of Kyshtym deposit, vein 175) – KK -175  <b><u>662/RU/15 (P)</u></b>	Mass fraction of elements:  Aluminium Titanium Calcium Magnesium Copper Manganese Sodium Potassium Lithium Phosphor Vanadium Chromium Nickel Zinc Cobalt Germanium Zirconium Cadmium Antimony Strontium Iron Barium Boron	Mass fraction, ppm  0,1-10,0 0,5-5,0 0,01-2,0 0,01-0,5 0,01-0,5 0,01-0,5 0,1-3,0 0,05-2,0 0,01-2,0 0,01-2,0 0,01-0,5 0,01-0,5 0,01-0,5 0,01-1,0 0,01-0,5 0,1-3,0 0,01 – 0,5 0,005 – 0,05 0,01- 0,5 0,01 – 0,5 0,1-3,0 0,01– 0,5 0,01 – 0,5	<b>2022</b>	Participation of all COOMET member-countries is desirable  Participants of work: <b>1. Belarus</b> - BelGIM; - Central laboratory of RUE “Belgeologiya” <b>2. Kazakhstan</b> <b>3. Kyrgyzstan</b> <b>4. Uzbekistan</b> GP “Central Laboratory” of State Committee of Geology and Mineral Resources of the Republic of Uzbekistan, 64-a, N. KHodzhibaev Str., Tashkent, Head of laboratory KHamro Sabirov <a href="mailto:hsabirov@yandex.ru">hsabirov@yandex.ru</a>

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9.	<p><b>Russia</b>  UNIIM – Affiliated Branch of  the D.I. Mendeleyev  Institute for Metrology  4, Krasnoarmeyskaya Str.  Ekaterinburg, 620075  Sergey V. Medvedevskikh  Director</p>	Pilot comparisons of CRM for composition of ferric ion solution  <u><b>700/RU/16 (P)</b></u>	It is proposed to conduct pilot comparisons of CRM for composition of ferric iron (III) solution, intended for verification, calibration and graduation of measurement instruments, certification of measurement procedures, accuracy control of measurement results and other metrological activities and control. The comparisons are relevant due to the need of comparing the degree of equivalence of reference materials to be compared for the demonstration of the capability to obtain compatible measurement results in testing laboratories of COOMET member-countries and other countries, which use these reference materials; establishing the possibility of mutual replacement of reference materials to be compared in their use in accordance with their purpose; the implementation of sub-clause 5.12 of ISO Guide 34:2009 by the producer of reference materials. The pilot NMI (UNIIM) plans and performs comparisons with participation (by decision of the pilot NMI) of organizations of COOMET member-countries, following the rules of COOMET and having technical competence for each particular case.		<b>2021</b>	Participants of work: <b>1. Kazakhstan</b> - KazinMetr <b>2. Russia</b> - UNIIM – Affiliated Branch of the D.I. Mendeleyev Institute for Metrology
10.	<p>Contact Person:  Olga N. Kremleva  acting Head of Department  Tel.: (343) 350-60-68  Fax.: (343) 350-24-68  E-mail: <a href="mailto:kremleva77@yandex.ru">kremleva77@yandex.ru</a>  E-mail: <a href="mailto:intermetron@uniim.ru">intermetron@uniim.ru</a></p>	Pilot comparisons of CRM for composition of copper ion solution  <u><b>701/RU/16 (P)</b></u>	It is proposed to conduct pilot comparisons of CRM for composition of copper ion solution, intended for verification, calibration and graduation of measurement instruments, certification of measurement procedures, accuracy control of measurement results and other metrological activities and control. The comparisons are relevant due to the need of comparing the degree of equivalence of reference materials to be compared for the demonstration of the capability to obtain compatible measurement results in testing laboratories of COOMET member-countries and other countries, which use these reference materials; establishing the possibility of mutual replacement of reference materials to be compared in their use in accordance with their purpose; the implementation of sub-clause 5.12 of ISO Guide 34:2009 by the producer of reference materials. The pilot NMI (UNIIM) plans and performs comparisons with participation (by decision of the pilot NMI) of organizations of COOMET member-countries, following the rules of COOMET and having technical competence for each particular case.		<b>2021</b>	Participants of work: <b>1. Kazakhstan</b> - KazinMetr <b>2. Russia</b> - UNIIM – Affiliated Branch of the D.I. Mendeleyev Institute for Metrology



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11.	<p><b>Russia</b> Federal State Budgetary Scientific Institution D.N. Pryanishnikov All-Russian Research Institute of Agrochemistry (VNIIA), the Federal Agency for Scientific Organizations (FASO Russia) 31A, Pryanishnikov Str., Moscow, 127550</p> <p>Contact person: Galina A. Stupakova Head of laboratory Tel.: (499) 976-05-52 Fax.: (499) 976-37-39 E-mail: <a href="mailto:vniiia@list.ru">vniiia@list.ru</a></p>	<p>Development of CRM for composition (agrochemical parameters) of brown heavy-loamy alkali soil SaSolP-05</p> <p><b><u>729/RU/16 (P)</u></b></p>	<p>Labile phosphorus</p> <p>Mobile potassium</p> <p>Organic matter</p> <p>Exchangeable</p> <p>Ammonium Nitrogen</p> <p>Nitrate nitrogen</p> <p>Cation exchange capacity</p> <p>Cation-anion composition of aqueous extract:</p> <p>Bicarbonate ion</p> <p>Chloride ion</p> <p>Sulphate ion</p> <p>Potassium</p> <p>Sodium</p> <p>Calcium</p> <p>Magnesium</p> <p>Solid</p> <p>Electric conductivity</p>	<p>10,0-50,0 ppm</p> <p>200-900 ppm</p> <p>1,00-5,00 %</p> <p>2,00-10,0 ppm</p> <p>1,00-20,0 ppm</p> <p>10,0-40,0 ppm</p> <p>0,10-1,0 mmol/100g</p> <p>5,00-20,0 mmol/100g</p> <p>0,50-2,00 mmol/100g</p> <p>0,01-0,20 mmol/100g</p> <p>5,00-20,0 mmol/100g</p> <p>0,50-2,00 mmol/100g</p> <p>0,50-2,00 mmol/100g</p> <p>0,10-1,50 %</p> <p>1,00-4,00 mS/cm</p>	<b>2021</b>	<p>Participation of all COOMET member-countries is desirable</p> <p>Participants of work:</p> <p><b>1. Belarus</b> - KUP “Gomel OPISKH” Pladunova V. Irina Tel.: + 375 0232 99-93-05 - The Institute for Soil Science and Agrochemistry Galina G. Karpovich Tel.: + 375 17 212-09-10</p> <p><b>2. Ukraine</b> NSC “Institute for Soil Science and Agrochemistry Research named after O.N. Sokolovsky”</p>

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12.	<p><b>Russia</b> JCS “Krastsvetmet”, 1, Transportny proezd, Krasnoyarsk the Russian Federation 660027 Director Mikhail V. Dyagilev</p> <p>Tel. +7 391 259 3333 E-mail: <a href="mailto:info@krastsvetmet.ru">info@krastsvetmet.ru</a></p> <p>Contact person: Konstantin A. Shatnykh, Head of projects</p> <p>tel. +7 391 259 33 33 (29-06) mobile phone.: +7 913 83 07 331 E-mail: <a href="mailto:KShatnyh@krastsvetmet.ru">KShatnyh@krastsvetmet.ru</a></p> <p>Alena Shleyning, Research Engineer tel. +7 391 259 33 33 (28-46) E-mail: <a href="mailto:A.Shleining@krastsvetmet.ru">A.Shleining@krastsvetmet.ru</a></p>	<p>Development of a CRM set for composition of refined platinum</p> <p><b>733/RU/17 (P)</b></p>	<p>Mass fraction of elements:</p> <p>Aluminium</p> <p>Calcium</p> <p>Magnesium</p> <p>Copper</p> <p>Manganese</p> <p>Chromium</p> <p>Nickel</p> <p>Cadmium</p> <p>Iron</p> <p>Bismuth</p> <p>Silver</p> <p>Palladium</p> <p>Rhodium</p> <p>Ruthenium</p> <p>Tin</p> <p>Lead</p> <p>Silicon</p> <p>Tellurium</p> <p>Iridium</p> <p>Molybdenum</p> <p>Arsenic</p> <p>Zinc</p>	<p>Массовая доля, ppm</p> <p>10-50</p> <p>1-40</p> <p>5-70</p> <p>1-140</p> <p>5-70</p> <p>5-70</p> <p>1-70</p> <p>5-70</p> <p>10-260</p> <p>5-50</p> <p>5-130</p> <p>5-230</p> <p>10-350</p> <p>1-100</p> <p>5-130</p> <p>1-70</p> <p>20-40</p> <p>1-70</p> <p>5-70</p> <p>1-100</p> <p>1-70</p> <p>5-100</p>	<p><b>2021</b></p>	<p>Participants of work:</p> <p><b>1. Bosnia and Herzegovina</b> Institute of metrology, Sarajevo</p> <p><b>2. Kazakhstan</b> - “The Cash Operations and Valuable Storage Center”, National Bank of Kazakhstan;</p> <p><b>3. Russia</b> - “NAZ”, Novosibirsk; - Participants of work: 1. Kazakhstan - KazinMetr 2. Russia - UNIIM – Affiliated Branch of the D.I. Mendeleyev Institute for Metrology, Ekaterinburg; - “EZ OTsM”, Ekaterinburg; - “ANSERTEKO”, Moscow; - “KMEZ”, Kyshtym.</p> <p><b>4. Switzerland</b> - Valcambi SA, Balerna.</p> <p><b>5. Ukraine</b> Institute for Single Crystals, National Academy of Sciences of Ukraine</p>

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13.	<p><b>Russia</b> West-Siberian Testing Centre (OJSC ‘WSTCentre’), 9 Ordzhonikidze Str., Novokuznetsk Kemerovo Province 654006</p> <p>Director: Natalia V. Zhuravleva Tel.: (8-3843) 74-57-22 Fax: (8-3843) 74-57-22 <i>e-mail: <a href="mailto:main@zsic.ru">main@zsic.ru</a></i></p> <p>Contact person: Svetlana N. Shushunova Head of Quality Control Department Tel./Fax: (8-3843) 74-57-22 <i>e-mail: <a href="mailto:shushunova_sn@zsic.ru">shushunova_sn@zsic.ru</a></i></p>	<p>Conducting comparison tests of certified characteristics of GSO 10894-2017 for composition and properties of coal, OS rank (SO-42)</p> <p><b><u>815/RU/20 (P)</u></b></p>	<p>Ash content (<math>A^d</math>) Mass fraction of total sulphur (<math>S_t^d</math>) Absolute density (<math>d_r^d</math>) Volatile-matter yield (<math>V^d</math>)</p> <p><i>Note: certified characteristics are calculated based on the dry condition of the fuel according to GOST 27313-2015</i></p>	<p>16,3 %  0,26 %  1,47 g/cm<sup>3</sup>  18,1 %</p>	<b>2021</b>	<p>Participants of work: <b>1. Latvia</b> <b>2. Ukraine</b> Participation of all COOMET member- countries is desirable</p>
14.		<p>Conducting comparison tests of certified characteristics of GSO 10895-2017 for composition and properties of coal, G rank (SO-43)</p> <p><b><u>817/RU/20 (P)</u></b></p>	<p>Ash content (<math>A^d</math>) Mass fraction of total sulphur (<math>S_t^d</math>) Absolute density (<math>d_r^d</math>) Mass fraction of phosphor (<math>P^d</math>)</p> <p><i>Note: certified characteristics are calculated based on the dry condition of the fuel according to GOST 27313-2015</i></p>	<p>11,9 %  0,32 %  1,45 g/cm<sup>3</sup>  0,045 %</p>	<b>2021</b>	<p>Participants of work: <b>1. Latvia</b> <b>2. Ukraine</b> Participation of all COOMET member- countries is desirable</p>

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15.	<p><b>Russia</b> West-Siberian Testing Centre (OJSC 'WSTCentre'), 9 Ordzhonikidze Str., Novokuznetsk Kemerovo Province 654006</p> <p>Director: Natalia V. Zhuravleva Tel.: (8-3843) 74-57-22 Fax: (8-3843) 74-57-22 <i>e-mail: <a href="mailto:main@zsic.ru">main@zsic.ru</a></i></p> <p>Contact person: Svetlana N. Shushunova Head of Quality Control Department Tel./Fax: (8-3843) 74-57-22 <i>e-mail: <a href="mailto:shushunova_sn@zsic.ru">shushunova_sn@zsic.ru</a></i></p>	<p>Conducting comparison tests of certified characteristics of GSO 11039-2018 for composition of polymetallic ore of the Quartz Hill deposit (SO-45)</p> <p><b><u>816/RU/20 (P)</u></b></p>	<p>Mass fraction of components:</p> <p>lead</p> <p>zinc</p> <p>copper</p> <p>barium oxide</p> <p>arsenic</p> <p>cadmium</p> <p>cobalt</p> <p>nickel</p> <p>titanium oxide</p> <p>aluminium oxide</p> <p>silicon dioxide</p> <p>iron oxide (tot.)</p> <p>total sulphur</p> <p>manganese oxide</p> <p>calcium oxide</p> <p>magnesium oxide</p> <p>sodium oxide</p> <p>potassium oxide</p> <p>gold</p> <p>silver</p>	<p>Mass fraction, %:</p> <p>3,45</p> <p>6,31</p> <p>0,89</p> <p>19,31</p> <p>0,047</p> <p>0,058</p> <p>0,00082</p> <p>0,0011</p> <p>0,060</p> <p>2,01</p> <p>45,84</p> <p>0,94</p> <p>8,28</p> <p>0,037</p> <p>1,57</p> <p>0,64</p> <p>0,056</p> <p>0,52</p> <p>2,52 mln<sup>-1</sup></p> <p>234 mln<sup>-1</sup></p>	<p><b>2021</b></p>	<p>Participants of work: <b>1. Kazakhstan</b> Participation of all COOMET member- countries is desirable</p>

1	2	3	4	5	6	7
16.	<p><b>Russia</b> JCS “Krastsvetmet”, 1, Transportny proezd, Krasnoyarsk the Russian Federation 660027 Director Mikhail V. Dyagilev</p> <p>Tel. +7 391 259 3333 E-mail: <a href="mailto:info@krastsvetmet.ru">info@krastsvetmet.ru</a></p> <p>Contact person: Konstantin A. Shatnykh, Head of projects</p> <p>tel. +7 391 259 33 33 (29-06) mobile phone.: +7 913 83 07 331 E-mail: <a href="mailto:KShatnyh@krastsvetmet.ru">KShatnyh@krastsvetmet.ru</a></p> <p>Alena Shleyning, Research Engineer tel. +7 391 259 33 33 (28-46) E-mail: <a href="mailto:A.Shleining@krastsvetmet.ru">A.Shleining@krastsvetmet.ru</a></p>	<p>Development of CRMs for composition of refined silver (set)</p> <p><b>818/RU/20 (P)</b></p>	<p>Mass fraction of elements:</p> <p>Aluminium Arsenic Gold Bismuth Calcium Cadmium Cobalt Chromium Copper Iron Indium Magnesium Manganese Nickel Lead Palladium Platinum Rhodium Antimony Selenium Silicon Tin Tellurium Zinc</p>	<p>Mass fraction, ppm</p> <p>1-100 1-100 1-150 1-150 0,5-20 1-50 1-150 1-70 4-500 1-100 1-70 1-50 1-150 1-150 2-100 1-500 1-500 1-150 1-150 1-150 1-400 3-400 1-200</p>	<p><b>2020</b></p>	<p>Participants of work:</p> <p><b>1. Belarus</b> <b>2. United Kingdom</b> <b>3. Germany</b> <b>4. India</b> <b>5. Spain</b> <b>6. USA</b> <b>7. Switzerland</b></p>

1	2	3	4	5	6	7
17.	<p>Russia Federal State Budgetary Enterprise of Science A.P. Vinogradov Geochemistry Institute Siberian Branch of Russian Academy of Sciences 1a Favorsky str. Irkutsk, 664033</p> <p>Contact Person: Dr. Irina E. Vasilieva Chief Researcher of Atomic Emission Analysis and Reference Material Group E-mail: <a href="mailto:vasira@igc.irk.ru">vasira@igc.irk.ru</a> Tel./fax: +7 (3952) 42 58 37 Mob.: +7 964 226 4811</p>	<p>Development of CRM for composition of Siberian pine needles (HSS-1) (<i>Pinus sylvestris</i>)</p> <p><u>/RU/20 (P)*</u></p> <p><i>* Project submitted for registration in accordance with the COOMET procedure</i></p>	Mass fraction of elements, %		2022	<p>Participants of work: <b>1. Belarus</b> BelGIM <b>2. Germany</b> Sympatec GmbH <b>3. Kazakhstan</b> The company "SOL instruments»</p> <p>Participation of all COOMET member- countries is desirable</p>
			Al	0,01 – 0,25		
			C	35 – 50		
			Ca	0,1 – 0,6		
			Cl	0,04 – 0,6		
			H	3 – 7		
			K	0,2 – 0,6		
			Mg	0,05 – 0,25		
			N	0,5 – 2		
			Na	0,003 – 0,015		
			O	30 – 50		
			P	0,07 – 0,25		
			S	0,07 – 0,3		
			Si	0,02 – 0,3		
			Mass fraction of elements, mg/kg			
			Ag	< 0,01		
			As	< 1,0		
			Au	< 0,05		
			B	10 – 50		
			Ba	1 – 20		
			Be	< 1,0		
			Bi	< 1,0		
			Br	1 – 50		
			Cd	< 0,1		
			Ce	< 1,0		
			Co	0,05 – 1,5		
			Cr	1 – 7		
			Cs	< 1,0		
			Cu	1 – 10		
			F	10 – 500		
Fe	150 – 800					

1	2	3	4	5	6	7
			Mass fraction of elements, mg/kg			
			Hg	< 1,0		
			I	0,3 – 0,5		
			La	< 1,0		
			Li	0,1 – 0,5		
			Mn	100 – 500		
			Mo	< 0,5		
			Nb	< 0,1		
			Nd	< 1,0		
			Ni	0,5 – 5		
			Pb	< 1,0		
			Pd	< 0,01		
			Pt	< 0,01		
			Rb	1 – 30		
			Sb	0,1 – 3		
			Sc	< 0,5		
			Se	< 1,0		
			Sn	< 1,0		
			Sr	3 – 25		
			Ti	3 – 15		
			V	0,1 – 2		
			W	< 1,0		
			Y	< 1,0		
			Yb	< 1,0		
			Zn	20 – 100		
			Zr	< 1,0		

Ind .N N	Country, CRM producer, contact person	Project	Certified characteristics	Planned values (range) of certified characteristics	Period of CRM development	Notes
1	2	3	4	5	6	7
<b>Part 2 ( projects, proposed for initial consideration are included)</b>						
1.	<b>Russia</b> UNIIM – Affiliated Branch of the D.I. Mendeleyev Institute for Metrology 4, Krasnoarmeyskaya Str. Ekaterinburg, 620075 Sergey V. Medvedevskikh Director	Development of CRM for isotope composition of lead enriched by <sup>206</sup> Pb, in nitrate solution	Mass fraction of lead isotopes:  with mass number 204  with mass number 206  with mass number 207  with mass number 208	0,01 – 5,00  25,2 – 97,0  1,00 – 22,0  1,00 – 52,0	<b>2021</b>	Participation of all COOMET member-countries is desirable
2.		Development of CRM for isotope composition of nickel enriched by <sup>60</sup> Ni isotope, in nitrate solution	Mass fraction of nickel isotopes:  with mass number 58  with mass number 60  with mass number 61  with mass number 62  with mass number 64	0,1 – 68,2  27,0 – 99,8  0,01 – 10,0  0,01 – 10,0  0,01 – 1,0	<b>2021</b>	Participation of all COOMET member-countries is desirable



1	2	3	4	5	6	7
<b>Part 2 ( projects, proposed for initial consideration are included)</b>						
3.	<b>Russia</b> JCS “Krastsvetmet”, 1, Transportny proezd, Krasnoyarsk the Russian Federation 660027 Director Mikhail V. Dyagilev  Tel. +7 391 259 3333 E-mail: <a href="mailto:info@krastsvetmet.ru">info@krastsvetmet.ru</a>	Development of CRMs for composition of the cathode Deposit	<b>Mass fraction of elements, %</b>		<b>2022</b>	Participation of all COOMET member-countries is desirable
			Au	70,00-90,00		
			Ag	2,00-10,00		
			Fe	0,01-20,00		
			Cu	3,00-20,00		
			Ni	0,50-5,00		
4.	Contact person: Konstantin A. Shatnykh, Head of projects  tel. +7 391 259 33 33 (29-06) mobile phone.: +7 913 83 07 331 E-mail: <a href="mailto:KShatnyh@krastsvetmet.ru">KShatnyh@krastsvetmet.ru</a>  Alena Shleyning, Research Engineer tel. +7 391 259 33 33 (28-46) E-mail: <a href="mailto:A.Shleining@krastsvetmet.ru">A.Shleining@krastsvetmet.ru</a>	Development of CRMs for composition of saturated activated carbon	<b>Mass fraction of elements, mg/g</b>		<b>2022</b>	Participation of all COOMET member-countries is desirable
			Au	5,00-10,00		
			Ag	0,10-2,00		
			Cu	0,10-0,50		

1	2	3	4	5	6	7
<b>Part 2 ( projects, proposed for initial consideration are included)</b>						
5.	<p><b>Russia</b> JCS “Krastsvetmet”, 1, Transportny proezd, Krasnoyarsk the Russian Federation 660027 Director Mikhail V. Dyagilev</p> <p>Tel. +7 391 259 3333 E-mail: <a href="mailto:info@krastsvetmet.ru">info@krastsvetmet.ru</a></p> <p>Contact person: Konstantin A. Shatnykh, Head of projects</p> <p>tel. +7 391 259 33 33 (29-06) mobile phone.: +7 913 83 07 331 E-mail: <a href="mailto:KShatnyh@krastsvetmet.ru">KShatnyh@krastsvetmet.ru</a></p> <p>Alena Shleyning, Research Engineer tel. +7 391 259 33 33 (28-46) E-mail: <a href="mailto:A.Shleining@krastsvetmet.ru">A.Shleining@krastsvetmet.ru</a></p>	Development of CRMs for composition of flotation concentrate	<b>Mass fraction of elements</b>		<b>2022</b>	Participation of all COOMET member-countries is desirable
			Au	40,00-60,00 g/t		
			Ag	10,00-50,00 g/t		
			Cu	200,00-300,00 g/t		
			Fe	8,00-12,00 %		
			As	1,70-2,50 %		
			Ni	40,00-65,00 g/t		
			Zn	500,00-550,00 g/t		
			S tot	7,00-9,00 %		
			S (sulfide)	7,00-9,00 %		
			C tot	1,60-1,80 %		
			C org	0,70-1,00 %		
			Cl (watersoluble)	10,00-30,00 g/t		

1	2	3	4	5	6	7
Part 2 ( projects, proposed for initial consideration are included)						
6.	<p><b>Russia</b> JCS “Krastsvetmet”, 1, Transportny proezd, Krasnoyarsk the Russian Federation 660027 Director Mikhail V. Dyagilev</p> <p>Tel. +7 391 259 3333 E-mail: <a href="mailto:info@krastsvetmet.ru">info@krastsvetmet.ru</a></p> <p>Contact person: Konstantin A. Shatnykh, Head of projects</p> <p>tel. +7 391 259 33 33 (29-06) mobile phone.: +7 913 83 07 331 E-mail: <a href="mailto:KShatnyh@krastsvetmet.ru">KShatnyh@krastsvetmet.ru</a></p> <p>Alena Shleyning, Research Engineer tel. +7 391 259 33 33 (28-46) E-mail: <a href="mailto:A.Shleining@krastsvetmet.ru">A.Shleining@krastsvetmet.ru</a></p>	Development of CRMs for composition of antimony cathode	Mass fraction of elements, %		2022	Participation of all COOMET member-countries is desirable
Bismuth			0,0005-0,10			
Iron			0,0005-0,10			
Gold			0,0008-0,10			
Cadmium			0,0005-0,10			
Silicon			0,0010-0,10			
Magnesium			0,0005-0,10			
Manganese			0,0005-0,10			
Copper			0,0005-0,10			
Arsenic			0,0010-0,10			
Sodium			0,0010-0,10			
Nickel			0,0005-0,10			
Tin			0,0005-0,10			
Lead			0,0005-0,10			
Silver			0,0005-0,10			
Sulfur			0,010-1,0			
Zinc			0,0005-0,10			