

JAB RR205:2016 Classification for scope of accreditation of reference material producers

Code of classification by JAB	Category	Class				
		(1)	(2)	(3)	(4)	(5)
A	Chemical composition					
A1		Metals				
A1.1			Ferrous			
A1.1.1				Steels		
A1.1.1.1					Carbon steels	
A1.1.1.2					Low alloy steels	
A1.1.1.3					High alloy steels	
A1.1.1.4					Cast steels	
A1.1.1.5					Speciality steels	
A1.1.2				Irons		
A1.1.2.1					White cast irons	
A1.1.2.2					Ductile irons	
A1.1.3				Gases in metals		
A1.2			Nonferrous			
A1.2.1				Aluminium alloys		
A1.2.2				Copper base alloys		
A1.2.3				Lead base alloys		
A1.2.4				Tin base alloys		
A1.2.5				Titanium base alloys		
A1.2.6				Zirconium base alloys		
A1.2.7				Gases in metals		
A1.3			Special alloys			
A1.4			Refractory metals and alloys			
A1.5			Rare earth metals			
A1.6			High purity metals			
A1.6.1				Solid forms		
A1.6.2				Spectrochemical materials		
A1.6.3				Spectrochemical solutions		
A2		Inorganic reference materials				
A2.1			Ores and minerals			

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		(1)	(2)	(3)	(4)	(5)
A2.2	Chemical composition		Cements, clays and related products			
A2.3			Ceramics, glasses and refractory oxides			
A2.3.1				Carbides, oxides and nitrides		
A2.3.2				Glasses		
A2.4			Agricultural chemicals and fertilisers			
A2.5			Solid fuels			
A2.5.1				Coal and coke		
A2.5.1.1					Ash	
A2.5.1.2					Major elements	
A2.5.1.3					Trace elements	
A2.6			Pure chemicals			
A2.6.1				Stoichiometry standards		
A2.6.1.1					Primary standards	
A2.6.1.2					Secondary standards	
A2.6.1.3					Working standards	
A2.6.2				Chromatography standards		
A2.6.3				Pharmaceutical materials		
A2.6.4				Cosmetic materials		
A2.7			Stable isotope materials			
A3		Organic reference materials				
A3.1			Pure organic compounds			
A3.1.1				Compounds for elemental analysis		
A3.1.2				Compounds for molecular weight		
A3.1.3				Chromatography standards		
A3.1.4				Illicit drugs and their metabolites - (See also A8 Forensic Reference Materials)		
A3.1.4.1					Delta-9-THC and other cannabinoids	
A3.1.4.2					Amphetamine	
A3.1.4.3					Methylamphetamine	
A3.1.4.4					3,4-methylenedioxyamphetamine	
A3.1.4.5					3,4-methylenedioxy-methylamphetamine	
A3.1.4.6					3,4-methylenedioxyethylamphetamine	
A3.1.4.7					Diacetylmorphine	

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		(1)	(2)	(3)	(4)	(5)
A3.1.4.8	Chemical composition				Morphine	
A3.1.4.9					Cocaine	
A3.1.4.10					Lysergic acid diethylamide and isomers	
A3.1.5				Therapeutic drugs		
A3.1.6				Veterinary drugs		
A3.1.7				Steroids		
A3.1.8				Pesticides, herbicides, acaricides, etc		
A3.1.9				Metabolites of any of the above		
A3.1.10				Priority pollutants		
A3.1.10.1					PCBs, PAHs, etc	
A3.1.11			Fine chemicals			
A3.1.12			Pharmaceutical materials			
A3.1.13			Cosmetic materials			
A3.1.14			Isotopically labelled compounds			
A3.2			Agricultural materials, fertilisers			
A3.3			Food and feed			
A3.3.1			Nutrient component			
A3.3.1.1				General nutrition		
A3.3.1.1.1						Moisture
A3.3.1.1.2						Protein
A3.3.1.1.3						Lipid
A3.3.1.1.4						Carbohydrates
A3.3.1.1.5						Ash
A3.3.1.2				Dietary fiber		
A3.3.1.3				Minera		
A3.3.1.4				Vitamins		
A3.3.1.5				Amino acid		
A3.3.1.6				Fatty acid		
A3.3.1.7				Cholesterol		
A3.3.1.8				Organic acid		
A3.3.1.9				Sugar		
A3.3.2			Food additive			
A3.3.2.1				Antioxidant		

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		(1)	(2)	(3)	(4)	(5)
A3.3.2.2	Chemical composition				Emulsifier	
A3.3.3				Pollutant (Metal, Inorganic compound)		
A3.3.4				Pollutant (Organic compound)		
A3.3.4.1					Pesticide residue	
A3.3.4.2					Residual veterinary drugs	
A3.3.5				Natural toxin		
A3.3.5.1					Animal origin	
A3.3.5.1.1						Shellfish poison
A3.3.5.2					Botanical origin	
A3.3.5.3					Other biological origin	
A3.3.5.3.1						Mycotoxin
A3.3.6				Processed product		
A3.3.7				Genetically modified food		
A3.3.8				Specific raw materials (Allergen)		
A3.3.9				health supplement (Supplement)		
A3.3.10				Radioactivity		
A3.3.11				The others		
A3.4			Plastics and rubbers			
A3.4.1				Hardness		
A3.4.2				Natural rubber content		
A3.4.3				Identity		
A3.4.3.1					Copolymers	
A3.4.3.2					Plasticisers	
A3.4.3.3					Vulcanising agents	
A3.4.3.4					Blowing agents	
A3.4.3.5					Antioxidants	
A3.4.3.6					Fillers	
A3.4.3.7					Flame retardant	
A3.4.3.8					Heavy metal	
A3.5			Petroleum products			
A3.5.1				Fuels and lubricants		

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		(1)	(2)	(3)	(4)	(5)
A3.5.1.1	Chemical composition				Lead	
A3.5.1.2					Vanadium	
A3.5.1.3					Nickel	
A3.5.2				Transformer oils		
A3.5.2.1					Moisture	
A3.5.2.2					PCBs	
A3.5.3				Heat exchange fluids		
A3.5.3.1					Moisture	
A3.5.3.2					PCBs	
A3.6			Vegetable oils and fats			
A3.6.1				Fatty acid profile		
A3.6.2				Triglyceride composition		
A4		Environmental reference materials				
A4.1			Soils and sludges			
A4.1.1				Soils		
A4.1.1.1					Trace elements	
A4.1.1.2					Mineral content	
A4.1.1.3					Trace organics	
A4.1.1.4					TCLP leachate	
A4.1.2				Bottom sediment		
A4.1.2.1					Trace elements	
A4.1.2.2					Mineral content	
A4.1.2.3					Trace organics	
A4.1.2.4					TCLP leachate	
A4.1.3				Sludges		
A4.1.3.1					Trace elements	
A4.1.3.2					Mineral content	
A4.1.3.3					Trace organics	
A4.1.3.4					TCLP leachate	
A4.2			Ashes			
A4.2.1				Fly ash from coal and coke		
A4.2.1.1					Major elements	
A4.2.1.2					Trace elements	

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		(1)	(2)	(3)	(4)	(5)
A4.2.1.3	Chemical composition				Organic pollutants	
A4.2.1.4					Other analytes	
A4.2.2				Incinerator ash		
A4.2.2.1					Major elements	
A4.2.2.2					Trace elements	
A4.2.2.3					Organic pollutants	
A4.2.2.4					Other analytes	
A4.3			Waters			
A4.3.1				Potable water		
A4.3.1.1					Routine analytes	
A4.3.1.2					Trace elements	
A4.3.1.3					Organic pollutants	
A4.3.1.4					Other analytes	
A4.3.2				Fresh water		
A4.3.2.1					Major elements	
A4.3.2.2					Trace elements	
A4.3.2.3					Organic pollutants	
A4.3.2.4					Other analytes	
A4.3.3				Sea water		
A4.3.3.1					Major elements	
A4.3.3.2					Trace elements	
A4.3.3.3					Organic pollutants	
A4.3.3.4					Other analytes	
A4.3.4				Industrial waste water		
A4.3.4.1					Routine analytes	
A4.3.4.2					Trace elements	
A4.3.4.3					Organic pollutants	
A4.3.4.4					Other analytes	
A4.3.5				Treated sewage		
A4.3.5.1					Routine analytes	
A4.3.5.2					Trace elements	
A4.3.5.3					Organic pollutants	
A4.3.5.4					Other analytes	

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		(1)	(2)	(3)	(4)	(5)
A4.4	Chemical composition		Plant material			
A4.4.1					Trace elements	
A4.4.2					Mineral content	
A4.5			Marine			
A4.5.1				Fish		
A4.5.1.1					Trace elements	
A4.5.2				Molluscs		
A4.5.2.1					Mineral content	
A4.5.3				Plankton		
A4.5.3.1					Organics	
A4.6			BOD reference compounds			
A4.7			Miscellaneous biological materials			
A4.7.1				Human hair		
A5		Health and industrial hygiene				
A5.1			Clinical laboratory materials			
A5.2			Ethanol solutions			
A5.3			Toxic substances in urine			
A5.3.1					Toxic metals	
A5.3.2					Fluoride	
A5.3.3					Mercury	
A5.4			Drugs of abuse in urine			
A5.5			Drugs of abuse in hair			
A5.6			Materials on filter media			
A5.7			Trace elements in blank filters			
A5.8			Lead in paint (powder and sheet forms)			
A5.9			Respirable silica			
A6		Engine wear materials				
A6.1			Metallo-organic compounds			
A6.2			Wear metals in oil			
A7		Analysed gases				
A7.1			Pure gas			
A7.2			Gas mixtures			
A7.3			Trace volatile organic compounds			

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		(1)	(2)	(3)	(4)	(5)
A8	Chemical composition	Forensic reference materials				
A8.1		Ethanol reference standards				
A8.1.1		Ethanol				
A8.1.2		Ethanol, aqueous solutions containing 0.050, 0.150, 0.250 g/100mL				
A8.2		Drugs (individually named) and metabolites [metabolites to include glucuronides]				
A8.2.1		In whole human blood and urine [See also A3.1 Pure Organic Compounds]				
A8.3		Glasses				
A8.3.1		Bottle				
A8.3.2		Window				
A8.3.3		Automotive				
A8.3.4		Spectacle				
A8.4		Paints				
A8.4.1		Automotive				
A8.4.2		Architectural				
A8.5		Accelerants				
A8.5.1		Flammable liquids and residues thereof				
A8.6		Explosives and primers				
A8.7		Gunshot residues				
A8.8		Noxious substances				
A8.8.1		Crowd control agents				
A8.8.1.1		Capsaicin				
A8.8.1.2		O-chlorobenzalmalonitrile (CS)				
A8.8.1.3		Chloroacetophenone (CN)				
A8.9		Document				
A9	Ion activity					
A9.1		pH standards				
A9.2		Ion selective electrode calibrants				
A9.3		Conductivity standards				
A9.4		Buffer solution				

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		(1)	(2)	(3)	(4)	(5)
B	Biological and clinical properties					
B1		General Medicine				
B1.1			Human serum materials (powder and solution forms)			
B2		Clinical Chemistry				
B2.1			Proteins			
B2.2			Lipids and Lipoproteins			
B2.3			Enzymes			
B2.4			Hormones			
B2.5			Electrolytes and Trace elements			
B2.6			Carbohydrates			
B2.7			Non-protein Nitrogens			
B2.8			Tumor Markers			
B3		Tissue Pathology				
B4		Haematology and Cytology				
B4.1			Complete Blood Counts			
B4.2			Hemogram			
B5		Immunohaematology				
B6		Immunology				
B7		Parasitology				
B8		Bacteriology and Mycology				
B8.1			Reference cultures			
B8.2			Antibiotics			
B9		Virology				
B10		Urine Chemistry				
B10.1			Urine Components			
B10.2			Urine Sediments			
B11		Other biological and clinical reference materials				
B12		Forensic Reference Materials				
B12.1			Purified DNA of known and continuing genetic composition			

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		(1)	(2)	(3)	(4)	(5)
B12.2	Biological and clinical properties		Human, primate and animal blood			
B12.3			Animal hairs			
B12.4			Fibres (see also C7.1 to C7.3)			
C	Physical properties					
C1		Reference Materials with Optical Properties				
C1.1			Optical rotation			
C1.2			Refractive index			
C1.3			Spectral absorbance			
C1.3.1				visible		
C1.3.2				ultraviolet		
C1.3.3				infrared		
C1.4			Specular reflectance			
C1.5			Colour			
C1.5.1				white reference material (opal glass)		
C1.5.2				ceramic tiles		
C2		Reference Materials with Electrical and Magnetic Properties				
C2.1			Dielectric strength			
C2.2			Resistivity			
C2.3			Magnetic susceptibility			
C3		Reference Materials for Frequency Measurements				
C4		Reference Materials for Radioactivity				
C4.1			Radiation dosimetry			
C4.2			Radiopharmaceuticals			
C4.3			Labelled compounds			
C4.4			Natural matrix materials			
C4.5			Carbon-14 dating			
C5		Reference Materials for Thermodynamic Properties				
C5.1			Calorimetry			
C5.2			Thermal conductivity			
C5.2.1				Metals		
C5.2.2				Pyrex glass		

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		(1)	(2)	(3)	(4)	(5)
C5.2.3	Physical properties			Resin-bonded fibre board		
C5.3			Vapour pressure			
C5.4			Thermal expansion			
C5.5			Thermal resistance			
C5.6			ITS-90 temperature fixed point			
C5.7			Curie point			
C5.8			Boiling point			
C5.9			Melting point			
C5.10			Thermal analysis standards			
C6		Reference Materials for Physicochemical Properties				
C6.1			Density			
C6.2			Viscosity			
C6.3			Surface tension			
C6.4			Molecular weight			
C7		Reference Materials for Fibre Identification				
C7.1			Natural fibres			
C7.1.1				Animal hairs		
C7.1.2				Plant fibres		
C7.2			Synthetic fibres			
C7.2.1				Organic polymers		
C7.2.2				Inorganic		
C7.3			Asbestos fibres			
C7.3.1				Crude fibres		
C7.3.2				Mounted specimens for fibre counting		
C8		Reference Materials for other properties				
C8.1			Shear testing of powders			
C8.2			Minerals for x-ray diffraction			
D	Engineering Properties					
D1		Surface Finish				
D1.1			Surface roughness			
D1.2			Corrosion			
D1.3			Microhardness			
D1.4			Abrasive wear			

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		(1)	(2)	(3)	(4)	(5)
D1.5	Engineering Properties		Properties of films and surfaces			
D1.5.1				Nominal thickness		
D1.5.1.1					X-ray fluorescence	
D1.5.1.2					B particle backscattering	
D1.5.1.3					Ion beam sputtering	
D2		Sizing				
D2.1			Particle size			
D2.1.1				Particulate materials		
D2.1.2				Latex sphere suspensions		
D2.2			Surface area			
D3		Nondestructive Testing				
D3.1			Dye penetrant test blocks			
D3.2			Artificial flaw for eddy current			
D3.3			Magnetic particle inspection			
D4		Hardness				
D4.1			Rockwell hardness			
D4.2			Izod hardness			
D5		Impact Toughness				
D5.1			Charpy V-notch test blocks			
D6		Tensile Strength				
D7		Elasticity				
D8		Creep				
D9		Fire Research				
D9.1			Surface flammability			
D9.2			Smoke density			
E	Miscellaneous Properties					
E1		(Sub-categories to be developed as required).				