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**Technical terms for analytical
chemistry (Analytical instrument
part)**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee, as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Analytical Instruments Manufacturers' Association (JAIMA)/ Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS K 0215 : 1989** is replaced with this Standard.

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Technical terms for analytical chemistry (Analytical instrument part)

1 Scope This Japanese Industrial Standard specifies the principal terms used for analytical instrument part in analytical chemistry and their definitions.

2 Classification The classification of terms shall be as follows:

- a) **General and common matter**
- b) **Electrochemical analytical instrument**
- c) **Optical analytical instrument**
- d) **Electromagnetic analytical instrument**
 - 1) Mass analytical instrument
 - 2) X-ray analytical instrument
 - 3) Electron microscope
 - 4) Nuclear magnetic resonance apparatus
- e) **Surface analytical instrument**
- f) **Separation analytical instrument**
 - 1) Chromatograph
 - 2) Electrophoresis analytical instrument
- g) **Flow analytical instrument**
- h) **Thermal analytical instrument**
- i) **Automatic (continuous) analytical instrument (environment analysis, analysis for process · job site)**
- j) **Biotechnology analytical instrument**

3 Terms and definitions The terms and definitions shall be as follows.

Further, English equivalent is appended for informative reference.

- Remarks
- 1 When not less than two terms arranged, the priority order for use shall be the said sequence.
 - 2 Although terms are, as a rule, used respectively in a range of classification in clause 2, for the term which may be misunderstood, the use field is given in parentheses after the term.
 - 3 For the term of which reading is mistakable, the reading of HIRAGANA is given by writing in parentheses under the term.

- 4 The English equivalent (informative), of which not less than two terms are mentioned together with placing semicolon (;) between, are synonyms respectively.
- 5 The abbreviation based on alphabet used in many ways is mentioned together in the columns of term and English equivalent.

3.1 General and common matter

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1001	機器分析	KIKI BUNSEKI	A chemical analysis in which instruments are used. It is especially called when a large type or middle type of apparatus is used in analysis such as mass analysis, electromagnetic analysis, optical analysis, thermal analysis, chromatography.	instrumental analysis
1002	検出下限	KENSYUTU KAGEN	The smallest amount (value) to be detectable.	detection limit
1003	検出器	KENSYUTUKI	The generic term of element, instrument or apparatus by which the physical quantity, substance, etc. to be the object for measurement is detected and converted to the signal such as electric current and voltage.	detector
1004	検知管	KENTIKAN	An instrument in which the absorbent or liquid containing colouring reagent, etc. is filled in a tube, gas is passed through this tube and the detection or simple determination of a very small amount of component in the gas is carried out.	detecting tube
1005	検量線	KENRYÔSEN	A curve in which the relation between the specific property, quantity, concentration, etc. of substance and the measured value is expressed.	working curve
1006	検量線用溶液	KENRYÔSEN YÔ YÔEKI	A solution of a known concentration to be used for preparing a working curve.	working solution
1007	校正(分析計の)	KOUSEI (BUNSEKI KEI NO)	An operation in which the relation between the value indicated by analyzer and the true value is obtained by using the standard, reference material, etc., and the bias is corrected.	calibration
1008	最小目盛	SAISYÔ MEMORI	The minimum scale which an apparatus has.	minimum scale
1009	最大目盛	SAIDAI MEMORI	The maximum scale which an apparatus has.	maximum scale
1010	試料溶液	SIRYÔ YÔEKI	A solution which is prepared to the condition for measurement by pretreating the analytical sample of liquid or solid.	test solution

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1011	超臨界流体抽出, SFE	TYÔ RINKAI RYÛTAI TYÛSYUTU, ESU-EHU-î	An extraction in which supercritical fluid is used.	supercritical fluid extraction
1012	定量下限	TEIRYÔ KAGEN	The minimum amount (value) or the minimum concentration by which the analyte can be determined according to a certain analytical method.	minimum limit of determination
1013	定量上限	TEIRYÔ ZYÔGEN	The maximum amount (value) or the maximum concentration by which the analyte can be determined according to a certain analytical method.	maximum limit of determination
1014	定量範囲	TEIRYÔ HANT	A range from the maximum limit of determination to the minimum limit of determination.	—
1015	内標準法	NAI HYÔZYUN HÔ	A method in which a definite amount (<i>B</i>) of internal standard component different from the analytical object is added to the some standard analytical samples containing the objective component for analysis (<i>A</i>), an analysis is carried out, the relation curve between amount ratio (<i>A/B</i>) and signal ratio (<i>IA/IB</i>) is made, then an analysis is carried out by adding a known amount of internal standard component to the objective analytical sample and the analyte is determined from the relation curve obtained previously.	internal standard method
1016	バリデーション	BARIDÊSYON	A codified action in which any procedure, process, mechanical equipment, raw material, action or system is proved so that the expected results are given.	validation
1017	分析計, 分析機器	BUNSEKI KEI, BUNSEKI KIKI	A machine or instrument by which the qualitative and quantitative measurements of property, structure, composition, etc. of the objective analytical sample for analysis are carried out and converted to the designated signals.	analyzer ; analyser
1018	分析検査	BUNSEKI KENSA	An acceptance inspection in which an analysis is carried out by using the prepared analytical sample for analysis and the results are compared with the specified value of chemical component specified in the product standard and judged.	—

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1019	分析誤差	BUNSEKI GOSA	The error produced when a chemical analysis is carried out.	analysis error ; analytical error
1020	分析システム	BUNSEKI SISUTEMU	An aggregate of analytical apparatus in which some analytical elements are mutually related and the function wholly united is exhibited.	analytical instruments system
1021	分析試料	BUNSEKI SIRYÔ	a) A sample which is weighed out from the objective analytical sample for analysis for the purpose of carrying out analysis. b) A analytical sample prepared to the condition for measurement.	analytical sample
1022	分析線	BUNSEKI SEN	a) A specific spectrum (an emission line of objective element) which is utilized for the determination of element in spectrochemical analysis. b) An emission line at specific wavelength which is utilized for the determination of specific element in emission spectrochemical analysis.	analytical line
1023	分析装置	BUNSEKI SÔTI	An apparatus which has a series of function from the pretreatment operation of the objective analytical sample for analysis to analysis, measurement and data sampling.	analytical instrument
1024	分析種, 分析対象成分	BUNSEKI SYU, BUNSEKI TAISYÔ SEIBUN	A component for test in analytical sample or sample solution.	analyte

3.2 Electrochemical analytical instrument

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2001	アノード (電気化学分析の)	ANÔDO (DENKI KAGAKU BUNSEKI NO)	An electrode in which oxidization reaction progresses.	anode

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2002	アンペロメトリー	ANPEROMETORĪ	An analytical method in which the flowing current is measured by applying the constant potential to working electrode.	amperometry
2003	イオン交換膜電極	ION KÔKANMAKU DENKYOKU	An ion-selective electrode in which an ion-exchange membrane is made an inductive membrane.	ion-exchange membrane electrode
2004	イオン選択性電極式濃度計	ION SENTAKUSEI DENKYOKUSIKI NÔDOKEI	An instrument by which ion concentration (activity) is measured by using an ion-selective electrode for detection.	—
2005	イオン電極, イオン選択性電極, ISE	ION DENKYOKU, ION SENTAKUSEI DENKYOKU, AI-ESU-Ī	An electrode which generates electric potential by responding the activity of a specific ion in solution.	ion selective electrode ; ISE
2006	液間電位差	EKIKAN DEN'Ī SA	A potential difference which is generated between two kinds of electrolytic solutions by a difference in composition when both electrolytic solutions come in contact with each other.	liquid junction potential
2007	液絡 (電気化学分析の)	EKIRAKU (DENKI KAGAKU BUNSEKI NO)	Electrical junction connected by a salt bridge.	liquid junction (for electrochemical analysis)
2008	塩橋	ENKYÔ	Electrically connecting two kinds of solutions using an electrolytic solution.	salt bridge
2009	カソード (電気化学分析の)	KASÔDO (DENKI KAGAKU BUNSEKI NO)	An electrode in which reduction reaction progresses.	cathode (for electrochemical analysis)
2010	ガラス電極	GARASU DENKYOKU	Glass electrode which is sensitive membrane used as ion selective equipment.	glass electrode
2011	ガルバニ電池	GARUBANI DENTI	A cell which is obtained by immersing two different metals in electrolyte.	galvanic cell

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2012	ガルバニ電池式酸素計	GARUBANI DENTISIKI SANSOKEI	An instrument which is a cell composed of a working electrode (such as Ag cathode) and a counter electrode (such as Pb anode) and in which the oxygen concentration is measured by measuring the reduction current of oxygen diffused through diaphragm.	galvanic cell type oxygen analyzer
2013	ガルバノスタット	GARUBANO SUTATTO	An instrument which electrolyzes by keeping the current flowing in working electrode constantly.	galvanostat
2014	カロメル電極	KAROMERU DENKYOKU	A reference electrode consist of potassium chloride solution mercury (I) chloride mercury electrode series.	calomel electrode
2015	銀-塩化銀電極	GIN-ENKAGIN DENKYOKU	A reference electrode consist of chloride ion solution silver chloride silver electrode series.	silver-silver chloride electrode
2016	クーロメーター	KÛROMÊTÂ	An instrument for the measurement of electric quantity.	coulometer
2017	酵素電極	KOUSO DENKYOKU	A membrane electrode in which the enzyme membrane immobilized with enzyme is taken as the field of reaction.	enzyme electrode
2018	固体電解質	KOTAI DENKAI SITU	The generic name for solid substance which performs ionic conduction.	solid electrolyte
2019	固体膜電極	KOTAI MAKU DENKYOKU	An ion-selective electrode in which an insoluble solid-state inductive membrane is utilized.	solid-state membrane electrode
2020	サイクリックボルタメトリー	SAIKURIKKU BORUTANMETORI	A voltammetry in which the potential of working electrode is swept in reciprocation within a certain range and the relation between the flowing current caused by response and the electrode potential is measured.	cyclic voltammetry
2021	作用電極	SAYÔ DENKYOKU	An electrode in which the objective electrode reaction is carried out.	working electrode
2022	酸化還元電位差計, ORP 計	SANKA KANGEN DENTSAKEI, Ô-ÂRU-PÎ KEI	An instrument for measurement of the equilibrium potential of activity ratio of an oxidant and reductant in aqueous solution.	oxidation-reduction potentiometer

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2023	残余電流	ZAN'YO DENRYŪ	A current which flows by causes other than electrolysis of an aimed depolarizer in electrolysis.	residual current
2024	支持電解質	SIZI DENKAI SITU	An electrolyte more difficult to be electrolyzed, which is added to an electrolyte for lessening migration current to minimum that it can be neglected in polarography.	supporting electrolyte
2025	指示電極	SIZI DENKYOKU	An electrode to monitor the changes of electrochemical property of solution.	indicator electrode
2026	修飾電極	SÔSYOKU DENKYOKU	An electrode of which the surface is adequately modified by a chemical species for the purpose of making to have additional function.	modified electrode
2027	ジルコニア式酸素計	ZIRUKONIASIKI SANSOKEI	An analyzer for oxygen in gas, which uses partially stabilized zirconia used as solid electrolyte.	zirconia type oxygen analyzer
2028	水素電極	SUISO DENKYOKU	A half cell consist of platinum H ₂ H ⁺ which indicate equilibrium potential by electrode reaction of 2H ⁺ + 2e = H ₂ .	hydrogen electrode
2029	セル定数 (電気伝導率 測定のもの)	SERU TEISŪ (DENKI DENDÔRITU SOKUTEI NO)	An unique constant for every cell which is used to measure electrical conductivity, i.e. the ratio of conductance and electrical conductivity.	cell constant (for conductivity measurement)
2030	選択係数 (イオン電極 のもの)	SENTAKU KEISŪ (ION DENKYOKU NO)	A value indicating the degree of an influence which coexisting ions in aqueous solution have on a potential by measuring objective ion.	selectivity constant (of ion selective electrode)
2031	対極	TAIKYOKU	An electrode which is used by making a pair of a working electrode and itself in electrolysis.	counter electrode
2032	直流ポーログラ フィー	TYOKURYŪ PÔRARO- GURAFI	An analytical method which is performed by analyzing a d.c. polarogram obtained by d.c. applied voltage.	direct current polarography

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2033	定電位電分解分析法	TEIDEN'I DENKAI BUNSEKI HÔ	An analytical method in which electrolysis is performed by making an electric potential of a working electrode constant to measure electrolytic current in electrolytical analysis.	electrolytic analysis at constant potential
2034	定電流電分解分析法	TEIDENRYÔ DENKAI BUNSEKI HÔ	An analytical method in which electrolysis is carried out by making the current flowing in working electrode constant.	electrolytic analysis at constant current
2035	滴水水銀電極	TEKIKAI SUIGIN DENKYOKU	An electrode which is used by dropping mercury from the top of a capillary.	dropping mercury electrode
2036	電位差滴定法	DEN'ISA TEKITEI HÔ	A volumetric analytical method in which the end point of titration is determined by variation in a potential difference near the equivalence point of an indicator electrode dipped in a solution to be titrated.	potentiometric titration
2037	電解重量分析法	DENKAI ZYÛRYÔ BUNSEKI HÔ	An analytical method in which the mass of a substance deposited on an electrode by electrolysis is measured to perform determination.	electrogravimetric analysis
2038	電解分析法	DENKAI BUNSEKI HÔ	An analytical method that qualitative and quantitative analyses are performed by electrolysis, in electroanalysis.	electrolytic analysis
2039	電気化学光電池	DENKI KAGAKUKÔ DENTI	A cell in which the electrochemical reaction produced, when the chemical species in electronic conductor or ion conductor absorb photoenergy, is made driving force.	electrochemical photocell
2040	電気化学セル	DENKI KAGAKU SERU	A container having the electrode in which electrochemical phenomenon progresses in electrochemical analysis.	electrochemical cell
2041	電気化学発光法	DENKI KAGAKU HAKKÔ HÔ	An analytical method for measurement of radiation of light produced caused by electrode reaction.	electro-chemiluminescence
2042	電気化学分析法	DENKI KAGAKU BUNSEKI HÔ	An analytical method in which the qualitative and quantitative analyses are carried out by utilizing the electrical property or electrochemical property of substance.	electrochemical analysis
2043	電気伝導度(溶液の)	DENKI DENDÔDO (YÔEKI NO)	A reciprocal of electric resistance (Ω) of solution. The unit is S (siemens).	conductance (of solution)

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2044	電気伝導率(溶液の), 導電率(溶液の)	DENKI DENDÔRITU (YÔEKI NO), DÔDENRITU (YÔEKI NO)	A reciprocal of electric resistivity ($\Omega \cdot m$) of solution. The unit is S/m.	conductivity (of solution)
2045	電気伝導率計, 導電率計	DENKI DENDÔRITUKEL, DÔDENRITU KEI	An instrument for measurement of the electric conductivity of solution.	conductivity meter
2046	電気伝導率セル, 導電率セル	DENKI DENDÔRITU SERU, DÔDENRITU SERU	A cell for measurement of electric conductivity.	conductivity cell
2047	電極(電気化学分析の)	DENKYOKU (DENKI KAGAKU BUNSEKI NO)	A system in which at least two phases containing the phase of electron conductor and the phase of ion conductor are contacted in series.	electrode (for electrochemical analysis)
2048	電気伝導度滴定法	DENKI DENDÔDO TEKITEI HÔ	A volumetric analysis method in which the end point of titration is obtained from the change of electric conductance of solution containing the analyte.	conductometric titration
2049	電流滴定法	DENRYÛ TEKITEI HÔ	A volumetric analytical method in which the end point of titration is determined from variation in current flowing between electrodes dipped into the solution containing the analyte to be titrated.	amperometric titration
2050	電流滴定法, クーロン滴定法	DENRYÛ TEKITEI HÔ, KÛRON TEKITEI HÔ	An analytical method in which titration is performed by electrolytically generating a titration reagent by 100 % current efficiency and quantitative analysis is performed from the quantity of electricity required for the electrolysis.	coulometric titration
2051	電流分析法	DENRYÛ BUNSEKI HÔ	An analytical method which is based on measurement of the quantity of electricity required for electrode reaction in electrolytic analysis, under the condition of 100 % current efficiency.	coulometric analysis
2052	内部電極	NAIBU DENKYOKU	A reference electrode which is inserted into an internal solution of an ion selective electrode having the internal solution.	internal electrode

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2053	燃料電池	NENRYÔ DENTI	A cell in which combustion reaction of electroactive flammable substance continuously undergone electrochemically between a pair of electrode which reaction directly converted to electrical energy.	fuel cell
2054	濃淡電池	NÔTAN DENTI	A cell wherein half cells, in which electrodes and electrode active substance are of the same kind and only the concentration or partial pressure of the electrode active substance are different.	concentration cell
2055	半電池	HAN DENTI	A system in which one electrode, whether it is anode or cathode, is inserted into an ion conductive material phase.	half cell
2056	半波電位	HANPA DEN'I	An electric potential which gives a current value of half the wave height of a polarogram in d.c. polarography.	half-wave potential
2057	pH計	PÎ ETTI KEI	An instrument which measures pH value of aqueous solution from a potential difference between the pH measuring electrode and the reference electrode.	pH meter
2058	pHスタット	PÎ ETTI SUTATTO	An instrument for maintaining pH of solution constantly.	pH-stat
2059	参照電極, 比較電極	SANSYÔ DENKYOKU, HIKAKU DENKYOKU	An electrode which has a known potential to a standard hydrogen electrode and is used as a reference when the potential difference of a working electrode or an indicator electrode is measured.	reference electrode
2060	微小電極 (電気化学分析の)	BISYÔ DENKYOKU (DENKI KAGAKU BUNSEKI NO)	The generic name for microelectrodes. The generic name for electrodes having a micro surface area. There are a mercury electrode used for polarography and amperometric titration, a rotating platinum electrode, etc.	microelectrode (for electrochemical analysis)
2061	微分パルスポーラログラフイー	BIBUN PARUSU PÔRAROGURAFÎ	An analytical method which is performed by analyzing a derivative coefficient of a polarogram to be obtained by application of a pulse state voltage.	derivative pulse polarography

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
2062	フロークーロメトリー	HURÔ KÛROMETORÎ	The coulometric analysis in which a flow electrolytic cell is used in flow analysis.	flow coulometry
2063	フロー電解セル	HURÔ DENKAI SERU	A flow type of electrochemical cell in which a rapid electrolysis is possible with almost 100 % of electrolysis efficiency while the objective electroactive substance goes from the inlet of electrolytic cell to the outlet.	flow electrolytic cell
2064	ポーラログラフ	PÔRAROGURAHU	An instrument in which a microelectrode is used as an indicator electrode to perform electrolysis between the counter electrode and the indicator electrode.	polarograph
2065	ポーラログラフ式酸素計	PÔRAROGURAHU SIKI SANSOKEI	A gas analyzer in which the fixed electrode covered with selective gas permeable membrane is used and the voltammetry of oxygen is carried out.	polarographic oxygen analyzer
2066	ポテンシヨスタット	POTENSYO SUTATTO	An instrument for automatically keeping an electrode potential constant.	potentiostat
2067	ボルタンメトリー	BORUTANMETORÎ	An analytical method which is performed by analyzing a voltage-current curve to be obtained by the electrolysis for which a microelectrode is used.	voltammetry
2068	膜電極	MAKU DENKYOKU	An electrode system which is composed of the selective membrane and the various electrodes provided inside.	membrane electrode
2069	溶出法, ストリッピング法, 溶出波ボルタンメトリ	YÔSYUTU HÔ, SUTORIPPINGU HÔ, YÔSYUTUHA BORUTANMETORÎ	An analytical method in which an aimed component is decomposed and concentrated on an electrode by electrolysis and then is electrochemically eluted and determined from the current value or electric quantity.	stripping method
2070	溶存酸素計	YÔZON SANSOKEI	An instrument for measurement of dissolved oxygen in water or aqueous solution.	dissolved oxygen meter

3.3 Optical analytical instrument

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3001	エシェル格子	ESYERU KÔSI	A diffraction grating on which linear grooves of a specific shape are notched where light is made to be incident on a steep slope side of the groove to intensify primary and secondary diffracted rays.	echelette grating
3002	炎光光度計	ENKÔ KÔDOKEI	An instrument for measurement of the emission spectrum intensity of an analytical objective element by conducting a sample into a flame.	flame photometer
3003	炎光分光光度計	ENKÔ BUNKÔ KÔDOKEI	A flame photometer of which the wavelength selection part is provided with a monochromator.	flame spectrophotometer
3004	回折格子	KAISETU KÔSI	A plate which has engraved lattice-shaped gouge that is a dispersion element which utilizes the diffraction effect of light. Concave type is also in practical use.	diffraction grating
3005	化学修飾剤	KAGAKU SYÛSYOKUZAI	A substance which is used for the removal or control of the influence from the interference component in sample solution.	matrix modifier
3006	拡散反射法	KAKUSAN HANSYA HÔ	A method in which the reflectance of a sample obtained by collecting a part or all of diffused reflected light.	diffused reflection method
3007	還元気化法(原子吸光分析の)	KANGEN KIKA HÔ (GENSI KYÛKÔ BUNSEKI NO)	A method in which an analytical objective component in a analytical sample solution is made gaseous substance by reducing gasification in order to measure atomic absorption.	reducing vaporization method (for atomic absorption spectrometry)
3008	干渉図形, インターフェログラム	KANSYÔ ZUKEI, INTÂFEROGURAMU	A figure in which the signals from interferometer are indicated so that the optical path difference of light is taken on an abscissa and the strength of light is taken on an ordinate.	interferogram
3009	干渉フィルター	KANSYÔ FIRUTÂ	An optical filter in which the optical interference action of thin membrane or multiple layers of membrane is utilized and the wavelength of light to be required can be taken out.	interference filter
3010	逆火	GYAKKA	A phenomenon which a flame taken into the burner to burn.	back fire ; flash back

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3011	キャリアーガス (ICP 発光分光分析の)	KYARIYĀ GASU (AI-CĪ-PĪ HAKKŌ BUNKŌ BUNSEKI NO)	The gas which is used for introducing an analytical sample to plasma in inductively coupled plasma.	carrier gas (for ICP atomic emission spectrophotometer)
3012	キャリアーガス (原子 発光分析又は発光分 光分析の)	KYARIYĀ GASU (GENSI KYŪKŌ BUNSEKI MATAWA HAKKŌ BUNKŌ BUNSEKI NO)	A gas for introducing a sample solution or its fog or otherwise the vapour of an analyte into an analytical sample measuring part.	carrier gas (for atomic absorption spectrometry or atomic emission spectrophotometer)
3013	吸光度	KYŪKŌDO	A numerical value expressing a reciprocal of transmittance by common logarithms.	absorbance
3014	吸収セル	KYŪSYŪ SERU	A container in which a solution and a solvent are contained in order to measure the absorption of light by them.	absorption cell
3015	蛍光	KEIKŌ	The light which is generated when the molecule of substance is excited to the single state of excitation by light and transferred to the normal state.	fluorescence
3016	蛍光光度計	KEIKŌ KŌDOKEI	An instrument which measures fluorescence intensity.	fluorometer
3017	蛍光分光光度計	KEIKŌ BUNKŌ KŌDOKEI	An instrument which measures fluorescence intensity by using a filter for selection of a wavelength on an excitation light side and a monochromator on a fluorescence side. The instrument which uses the monochromator on the excitation side and the filter on the fluorescence side is also called a spectrofluorometer.	spectrofluorometer, fluoro spectrophotometer
3018	原子吸光光度計	GENSI KYŪKŌ KŌDOKEI	An instrument with which an analytical objective component is atomized, and the absorption of light by said atomized vapour is measured.	atomic absorption spectrometer

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3019	原子吸光分光光度計	GENSI KYŪKŌ BUNKŌ KŌDOKEI	An atomic absorption photometer of which the wavelength selection part is used of a monochromator.	atomic absorption spectrophotometer
3020	光学的零位法	KŌGAKUTEKI REI HŌ	A method wherein in order to make the quantity of light flux on an analytical sample side equal to that on a contrast side in the spectrochemical analytical instrument of a double beam system, a photoattenuator installed on the light flux side of the contrast side is taken in and out, and transmittance is obtained from its displacement.	optical null method
3021	光学フィルター	KŌGAKU FIRUTĀ	An optical element which is used for taking out light of a specific wavelength range or by passing the light of the specific wavelength range.	optical filter
3022	光源	KŌGEN	A part which generates a light wave to be emitted, in a light analytical instrument.	light source
3023	光電管	KŌDEN KAN	A photo detection element that a cathode emitting electron by irradiation of light and an anode receiving the electron are enclosed in a glass tube and an intermediate electrode is not provided in the tube.	phototube
3024	光電子増倍管	KŌDENSI ZŌBAIKAN	A photo detection element wherein though the same photoelectron generation mechanism as for a phototube is provided, not less than one intermediate electrode for increasing electron is provided between the cathode generating the photoelectron and the anode.	photomultiplier
3025	光電測光法	KŌDEN SOKKŌ HŌ	A method wherein a photomultiplier or semiconductor detector are applied to detect spectral line intensity.	photoelectric detection method

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3026	光伝導セル	KÔDENDÔ SERU	A photo detection element which utilizes a phenomenon wherein resistance varies by irradiation of light.	photoconductive cell
3027	光度計	KÔDOKEI	An instrument which measures the intensity of light.	photometer
3028	シーケンシャル形分光器	SÎKENSYARUGATA BUNKÔKI	A spectrometer in which the strength of a series of spectral line in spectral incident light is sequentially measured.	sequential scanning spectrometer
3029	シースガス(原子吸光分析の)	SÎSU GASU (GENSI KYÛKÔ BUNSEKI NO)	An inert gas which is used for prevention of the oxidation, nitriding, etc. of the heating part of an analytical objective element and an apparatus in analytical operation.	sheath gas (for atomic absorption spectrometry)
3030	写真測光法(発光分光分析の)	SYASIN SOKKÔ HÔ (HAKKÔ BUNKÔ BUNSEKI NO)	A method wherein a spectrum dispersed with a spectrograph is made to expose photosensitive material to obtain a spectrogram, to identify and measure the blackening.	spectrophotographic measurement (for atomic emission spectrophotometer)
3031	重水素ランプ	ZYÛSUIISO RANPU	A hydrogen discharge tube in which deuterium is enclosed.	deuterium lamp
3032	シューマン乾板	SYÛMAN KANPAN	A photographic dry plate for measurement of a super ultra-violet region spectrum.	Schumann plate
3033	消光(蛍光光度分析の)	SYÔKÔ (KEIKÔ KÔDO BUNSEKI NO)	A phenomenon in which the molecule excited by light loses the fluorescence generating activity caused by the collision with other molecule, chemical reaction, etc.	quenching (for fluorescence spectrophotometer)
3034	錠剤法(赤外分光光度法の)	ZYÔZAI HÔ (SEKIGAI BUNKÔ KÔDO HÔ NO)	A method wherein a measuring analytical sample is pulverized and after uniformly mixing it into a medium of a pulverized state which has little absorption of light in a measuring wavelength range, it is moulded in a tablet to be measured.	tablet method, pellet method (for infrared spectrometry)
3035	焦電素子	SYÔDEN SOSI	An element which is produced by a crystal generating pyroelectron.	pyroelectric element
3036	助燃ガス(光分析の)	ZYONEN GASU (HIKARI BUNSEKI NO)	The gas which is mixed for the promotion of combustion in atomic absorption spectrometry, flame photometry, etc. Usually, air, oxygen, etc. are used.	auxiliary gas (for optical analysis)

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3037	試料セル(吸光度法の)	SIRYÔ SERU (KYÛKÔ KÔDO HÔ NO)	An absorption cell which contains analytical sample solution.	sample cell (of absorptiometry)
3038	試料電極(発光分光分析の)	SIRYÔ DENKYOKU (HAKKÔ BUNKÔ BUNSEKI NO)	An analytical sample body which is prepared as a discharge electrode. It is generally used by association with a graphite counter electrode.	sample electrode (for atomic emission spectrophotometer)
3039	真空熱電対	SINKÛ NETUDENTUI	An light detection element in which a thermocouple enclosed in fused silica and in which is vacuum.	vacuum thermocouple
3040	シングルモノクロメーター	SINGURU MONOKUROMÊTÂ	The monochromator in which the single dispersive device such as one diffraction grating, prism is used.	single monochromator
3041	水銀ランプ	SUIGIN RANPU	A discharge lamp in which mercury vapour of an appropriate pressure is enclosed.	mercury lamp
3042	水素化物発生装置	SUISOKABUTU HASSEI SÔTI	An instrument in which an analyte (for instance, arsenic, selenium, antimony, etc.) in analytical sample solution is reduced to gaseous hydride and is conducted into a flame or a heating absorption cell.	hydride generator
3043	スロットバーナー	SUROTO BÂNÂ	A burner of which the opening part is of a slot state.	slot burner
3044	赤外分光光度計	SEKIGAI BUNKÔ KÔDOKEI	A spectrophotometer which can measure in a wave number region from near 400 cm^{-1} to near $4\,000\text{ cm}^{-1}$.	infrared spectrophotometer
3045	積分球	SEKIBUN KYÛ	A photometric instrument in which the inside of sphere is covered with the white substance with diffuse reflection such as barium sulfate.	integrating sphere
3046	ゼロ合わせ(透過パーセントの)	ZERO AWASE (TÔKA PASENTO NO)	An operation wherein the indication of an indicator of a percent transmission scale is adjusted to a zero scale.	zero adjustment (of percent transmission)
3047	全反射減衰法	ZEN HANSYA GENSUI HÔ	A method wherein light of an analytical wavelength is made incident at an angle of not less than a critical angle, and total reflection is caused inside an analytical objective substance to obtain absorption spectra on the surface of the substance.	attenuated total reflectance method

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3048	全噴霧バーナー	ZEN HUNMU BÂNÂ	A burner of a system wherein a sample solution is sucked up, all the sucked up analytical sample solution is sprayed into a flame as particulates, and atomization is performed or otherwise light is emitted.	total consumption burner
3049	ダイオードアレイ検出器	DAIÔDO AREI KENSUYUTUKI	A multichannel photo sensing element in which photodiode is arranged in one dimension or two dimensions.	diode array detector
3050	対照セル(吸光光度法の)	TAISYÔ SERU (KYÛKÔ KÔDO HÔ NO)	An absorption cell which contains a solvent or a reference solution.	reference cell (of absorptiometry)
3051	ダブルモノクロメーター	DABURU MONOKUROMÊTÂ	A monochromator in which usually two single monochromators are connected in series optically.	double monochromator
3052	単光束方式	TANKÔSOKU HÔSIKI	A system wherein an optical path is not all branched off between the light source and the measuring part in a photometer and a spectrophotometer.	single beam
3053	中空陰極ランプ	TYÛKÛ INKYOKU RANPU	A discharge tube in which hollow cathode containing analytical objective element is enclosed together with neon or the like at a low pressure. It is used as the light source of atomic absorption analysis.	hollow cathode lamp
3054	超音波ネブライザー	TYÔONPA NEBURAIZÂ	A nebulizer which produces micromist by ultrasonic vibration.	ultrasonic nebulizer
3055	電気加熱方式(原子吸光分析の)	DENKI KANETU HÔSIKI (GENSI KYÛKÔ BUNSEKI NO)	A system in which sample is atomized by electrifying to heat a furnace in which graphite, heat-resisting metal, etc. is taken as heating unit.	electrothermal type (of atomic absorption spectrometer)
3056	透過パーセント	TÔKA PÂSENTO	Transmittance which is expressed by percentage.	percent transmission
3057	透過率	TÔKA RITU	A proportion how light is transmitted through substance, which is expressed by the ratio of the quantity of light after transmission and the quantity of light before transmission.	transmittance

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3058	同時測定分光器	DÔZI SOKUTEIGATA BUNKÔKI	A spectrometer in which incident light is made to spectrum and the strength of some spectral lines is simultaneously measured.	simultaneous spectrometer
3059	二波長測光方式	NIHATYÔ SOKKÔ HÔSIKI	A system wherein two monochromatic light fluxes of different wavelengths are passed through a measuring analytical sample to be reflected or absorbed, and light intensities thereof are measured.	double wavelength spectrometry
3060	ニューマチックセル (非分散赤外分析の)	NYŪMATIKKU SERU (HI BUNSAN SEKIGAI BUNSEKI NO)	An infrared detector which utilizes pressure variation by thermal expansion of gas.	pneumatic cell (for non-dispersive infrared spectrometry)
3061	ネブライザー	NEBURAIZĀ	An apparatus nebulize particulate.	nebulizer
3062	燃料ガス (光分析の)	NENRYÔ GASU (HIKARI BUNSEKI NO)	A gas which is used as fuel in atomic absorption analysis, flame photometry for atomization and excitation. Normally acetylene gas or propane are used.	fuel gas (for optical analysis)
3063	バックグラウンド等価 濃度	BAKKUGURAUNDO TÔKA NÔDO	A concentration of analyte which gives the signal strength equivalent to the strength of background.	background equivalent concentration ; B.E.C.
3064	発光分光分析装置	HAKKÔ BUNKÔ BUNSEKI SÔTI	An apparatus wherein energies such as light, heat, electricity are given to a sample from outside, an element or a compound is excited, and emission spectra which are irradiated are measured.	atomic emission spectrophotometer
3065	反射率	HANSYA RITU	The ratio of light intensity of reflected light from the surface of substance, and light intensity of reflected light from a reference substance.	reflectance
3066	半導体検出器	HANDÔTAI KENSYUTUKI	A photo sensing element of semiconductor which is composed of the crystal of compound or mixed crystal.	compound semiconductor element

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3067	光電池	HIKARI DENTI	A photo detection element which utilizes the internal photo-electric effect of metal, semiconductor, etc.	photocell
3068	非共鳴近接線方式(原子吸光分析の)	HIKYÔMEI KINSETUSEN HÔSIKI (GENSI KYÛKÔ BUNSEKI NO)	One of a background correction system wherein a spectral line adjacent to the resonance line of an analytical objective element which is generated from a hollow cathode lamp is used for background correction.	background correction method using non-resonance spectrum (for atomic absorption spectrometry)
3069	非分散(光分析の)	HIBUNSAN (HIKARI BUNSEKI NO)	Obtaining the same effect as dispersion by using a filter, a selective detector, etc. without using a dispersive device.	non-dispersion (of optical analysis)
3070	100 合わせ(透過パーセントの)	HYAKU AWASE (TÔKA PÂSENTO NO)	An operation in which the indication of an indicator of a percent transmission scale is adjusted to a 100 scale.	100 adjustment (of percentage transmission)
3071	フーリエ変換赤外分光度計, FT-IR	HÛRIE HENKAN SEKIGAI BUNKÔ KÔDOKEI, EHU-TÊ HAIHUN AI- ÂRU	Infrared spectrophotometer which to measure spectral spectra by Fourier transformation of the signal of an interference curve.	Fourier transform infrared spectrophotometer ; FT-IR
3072	複光束方式	HUKU KÔSOKU HÔSIKI	One of optical system in which light from a light source is branched off to a photometry side and an objective side on the way.	double beam
3073	プラズマガス	PURAZUMA GASU	A gas which principally forms plasma in inductively coupled plasma. It occasionally contains a cooling gas which is made to flow for cooling a torch.	plasma gas
3074	プリズム	PURIZUMU	A dispersive element which utilizes a property wherein the refractive index of light differs according to a wavelength.	prism
3075	フレーム原子吸光分析	HURÊMU GENSI KYÛKÔ BUNSEKI	The flame absorption spectrometry in which the analytical objective element in sample is atomized by flame and the absorbance of its atomic vapour layer is measured.	flame atomic absorption spectrometry

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3076	プレミックスバー ナー	PUREMIKKUSU BÂNÂ	A burner of a system wherein a combustion gas, an ignition improver gas, and an analytical sample solution are mixed in an atomizer chamber to be conducted into a flame.	premix burner
3077	分解能(光分析の)	BUNKAINÔ (HIKARI BUNSEKI NO)	The capability of spectrometer which is capable of separating the two neighbouring spectral lines.	revolving power (of optical analysis)
3078	分光器	BUNKÔKI	a) An instrument wherein light from one light source is dispersed and a slit image is focused in the order of wavelength on one focal plane. b) An instrument wherein spectra are made visually observable with the instrument of a).	a) spectrograph ; spectrometer b) spectroscope
3079	分光蛍光光度計	BUNKÔ KEIKÔ KÔDOKEI	An apparatus which measures fluorescence by using a monochromator for either wavelength selection parts on an excitation light side and on a fluorescence side.	fluorescence spectrophotometer
3080	分光光度計	BUNKÔ KÔDOKEI	A photometer with monochromator in wavelength splitting part.	spectrophotometer
3081	分散(光分析の)	BUNSAN (HIKARI BUNSEKI NO)	A phenomenon of light containing various wavelength components divided into light of each wavelength component by using a prism, and a diffraction grating.	dispersion (of optical analysis)
3082	分散素子(光分析の)	BUNSAN SOSI (HIKARI BUNSEKI NO)	An optical element for dispersion of light containing various wavelength light.	dispersive device (of optical analysis)
3083	ペーセント法(赤外分光 分析の)	PÊSUTO HÔ (SEKIGAI BUNKÔ BUNSEKI NO)	A method, which is one of an analytical sample preparation method to disperse into such as fluid paraffin.	paste method (for infrared spectrometry)

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3084	偏光ゼーマン方式(原子吸光分析の)	HENKÔ ZÊMAN HÔSIKI (GENSI KYÛKÔ BUNSEKI NO)	One of a background correction system to integrate Zeeman effect and polarization.	background correction method using polarized Zeeman effect (for atomic absorption spectrometry)
3085	補助ガス	HOZO GASU	A gas which is used for plasma to not to contact to torch in inductively coupled high-frequency plasma.	auxiliary gas
3086	補助電極(発光分光分析の)	HOZO DENKYOKU (HAKKÔ BUNKÔ BUNSEKI NO)	An electrode, which is one of an analytical sample electrode, for keeping a sample in a discharge field when the electrode is not formed by only the analytical sample.	supporting electrode (for atomic emission spectrophotometer)
3087	フォトダイオード	HOTO DAIÔDO	A photo detection element utilizes photoelectric effect which is one of diode.	photodiode
3088	ミクロホトメーター(発光分光分析の)	MIKUROHOTOMÊTÂ (HAKKÔ BUNKÔ BUNSEKI NO)	An instrument to measure transmissivity and blackness of a very little part. An instrument for measurement of the blackness of a spectral line image photographed on a photosensitive materia.	microphotometer (for atomic emission spectrophotometer)
3089	無電極放電ランプ	MUDENKYOKU HÔDEN RANPU	A discharge tube in which a metal halide or the like are enclosed and which is lit by high frequency discharge.	electrodeless discharge lamp
3090	迷光	MEIKÔ	Light of a wavelength component other than an aimed wavelength in the light which is dispersed to be taken out with a monochromator.	stray light
3091	モノクロメーター(光分析の)	MONOKUROMÊTÂ (HIKARI BUNSEKI NO)	An instrument which takes out monochromatic light of a specific wavelength in incident light.	monochromator (of optical analysis)
3092	誘導結合プラズマ, ICP	YÛDÔ KETUGÔ PURAZUMA, AI-SÎ-PÎ	Plasma which is obtained by flowing a specific high frequency current with an electric field generated by electromagnetic induction.	inductively coupled plasma ; ICP

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
3093	予備放電時間(発光分光分析の)	YOBI HÔDEN ZIKAN (HAKKÔ BUNKÔ BUNSEKI NO)	A time for which discharge is performed until a spectral line intensity is stabilized prior to analysis.	predischARGE ; preburn time (for atomic emission spectrophotometer)
3094	励起光(蛍光の)	REIKIKÔ (KEIKÔ NO)	The light which is irradiated for the purpose of transiting a molecule in normal state to the single state of excitation.	excitation light
3095	冷蒸気方式(原子吸光分析の)	REIZYÔKI HÔSIKI (GENSI KYÛKÔ BUNSEKI NO)	A system in which the absorption of light by the obtained atomic vapour at ordinary temperature is measured.	cold vapor atomic absorption method (for atomic absorption spectrometry)
3096	連続スペクトル光源方式(原子吸光分析の)	RENZOKU SUPEKUTORU KÔGEN HÔSIKI (GENSI KYÛKÔ BUNSEKI NO)	One of a background correction system in which light from a light source generating continuous spectra is used as background correction. Such as a deuterium lamp, a tungsten lamp are used.	background correction method using continuous spectrum source (for atomic absorption spectrometry)

3.4 Electromagnetic analytical instrument

a) Mass spectrometry instrument

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4001	イオン化エネルギー	IONKA ENERUGÎ	Energy which is required for ionization of a molecule, an atom, or an atomic group.	ionization energy
4002	イオン化(質量分析の)	IONKA (SITURYÔ BUNSEKI NO)	A method in which the analytical sample is made a positive ion or a negative ion in gas state.	ionization (of mass spectrometry)
4003	イオン化室	IONKA SITU	A small chamber, which is a part of an ionization source, for ionization of a molecule.	ionization chamber
4004	イオン化電流	IONKA DENRYÛ	A current of thermoelectron or ion which is used for ionization of an analytical sample molecule.	ionizing current

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4005	イオン源	IONGEN	A part of parts which compose a mass spectrometer for ionization of an analytical sample to produce an ion beam.	ion source
4006	イオンサイクロトロンの 共鳴形質量分析計	ION SAIKUROTORON KYÔMEIGATA SITURYÔ BUNSEKI KEI	A mass spectrometer utilizing such phenomenon that, when a high frequency electric field is applied to the rotational moving or helical moving ion in homogeneous magnetic field, the turning radius is increased by absorbing energy resonantly.	ion-cyclotron resonance mass spectrometer
4007	イオントラップ質量分 析計	ION TORAPPU SITURYÔ BUNSEKI KEI	A mass spectrometer having the function so that the ionized molecule only within the specific range of mass-to-charge ratio is held and selected.	ion trap mass spectrometer
4008	インビーム法	IN BÎMU HÔ	A method in which a solid analytical sample inserted into an ionization chamber is ionized by bringing it into contact with or approaching it to an electron beam, or otherwise by chemical ionization.	in-beam method ; IB
4009	エネルギー収束	ENERUGÎ SYÛSOKU	A phenomenon wherein an ion beam of same energy is focused by the ion of which the mass-to-charge ratio and direction are slightly different.	energy focusing
4010	エミッター(質量分析 の)	EMITTÂ (SITURYÔ BUNSEKI NO)	An analytical sample holder which is used in order to ionize an analytical sample in field desorption, field ionization.	emitter (of mass spectrometry)
4011	エレクトロスプレー	EREKUTORO SUPURÊ	A technology in which the analytical sample solution is sprayed by applying high voltage at the tip of capillary for supplying analytical sample solution.	electrospray
4012	エレクトロスプレーイ オン化	EREKUTORO SUPURÊ IONKA	The ionization method in which electrospray is used.	electrospray ionization
4013	化学イオン化	KAGAKU IONKA	Ionization of a sample molecule by using a reactant ion generated from a sample gas.	chemical ionization ; CI

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4014	基準ピーク	KIZYUN PĪKU	A peak which is used as a reference when the relative ion intensity of a mass spectrum is indicated. The peak of the maximum intensity is generally made the reference.	base peak
4015	キャピラリー電気泳動 質量分析法	KYAPIRARĪ DENKI EIDŌ SITURYŌ BUNSEKI HŌ	An analytical method which is carried out by using the combined apparatus of capillary electrophoresis apparatus with mass spectrometry apparatus.	capillary electrophoresis mass spectrometry ; CE/MS
4016	原子質量単位	GENSI SITURYŌ TANI	A unit of mass that 1/12 of the mass of one ¹² C atom is as 1.	atomic mass unit
4017	高周波プラズマ	KŌSYŪHA PURAZUMA	The inductively coupled plasma (ICP) which is generated by coupling inductively the high frequency power in radio wave domain, and the microwave induced plasma (MIP) which is generated by inducing of the high frequency power in micro-wave domain.	high frequency plasma
4018	高周波プラズマ質量分 析計	KŌSYŪHA PURAZUMA SITURYŌ BUNSEKI KEI	A mass spectrometer in which the ion, ionized by high frequency plasma and generated, is analyzed.	high frequency plasma mass spectrometer
4019	高速原子衝撃, FAB	KŌSOKU GENSI SYŌGEKI, EHU-Ê-BĪ	A method in which ion is generated by making a neutral atom accelerated to several keV so as to come collision with the sample.	fast atom bombardment ; FAB
4020	コレクタースリット	KOREKUTĀ SURITTO	A slit which is so established that only an ion beam of a specific mass-to-change ratio of which mass is separated is introduced to a detection system.	collector slit
4021	再構成イオンクロマト グラム	SAIKŌSEI ION KUROMATOGURAMU	A chromatogram according to not less than one specific ion which is drawn by processing a mass spectrum with a computer.	reconstructed ion chromatogram ; RIC

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4022	四重極質量分析計, QMS	SIZYŪKYOKU SITURYŌ BUNSEKI KEI, KYŪ-EMU-ESU	A mass spectrometer of a system in which an ion is separated according to a mass to charge ratio by using a quadruple of high frequency voltage multiplied by d.c. voltage.	quadruple mass spectrometer ; QMS
4023	質量数	SITURYŌ SŪ	Sum of the number of proton and neutron which consist of nucleus.	mass number
4024	質量スペクトル, マススペクトル	SITURYŌ SUPEKUTORU, MASU SUPEKUTORU	It is shown by a drawing by taking mass to charge ratio as abscissa and ion intensity as ordinate, it is occasionally given by a table.	mass spectrum
4025	質量電荷比, m/z	SITURYŌ DENKA HI, EMU-BAI-ZETTO	The ratio of ion mass expressed by atomic mass unit to electric charge.	mass-to-charge ratio ; m/z
4026	質量分析計	SITURYŌ BUNSEKI KEI	An instrument which measures a mass spectrum. An ion is generally detected as current to be recorded.	mass spectrometer
4027	磁場形質量分析計	ZIBAGATA SITURYŌ BUNSEKI KEI	A mass spectrometry of the system in which ion is separated corresponding to mass-to-charge ratio by using magnetic field.	magnetic sector type mass spectrometer
4028	磁場走査	ZIBA SŌSA	A scanning which is carried out by changing the strength of magnetic field for the measurement of mass spectrum.	magnetic field scanning
4029	試薬ガス	SIYAKU GASU	A gas which is used in order to ionize a sample molecule in a chemical ionization method.	reagent gas
4030	準安定イオン	ZYUN ANTEI ION	An ion among the ions generated and excited in an ionization chamber, which is easy to decompose after coming out from the ionization chamber.	metastable ion
4031	衝突活性化	SYŌTOTU KASSEIKA	A phenomenon that a part of translation kinetic energy is converted to an internal energy to be activated by the interaction (collision) of an ion in flight and a gas (argon or the like).	collisional activation ; CA
4032	スパークイオン化	SUPĀKU IONKA	Ionization of an analytical sample by spark discharge.	spark ionization

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4033	セパレーター (ガスクロマトグラフ質量分析計の)	SEPARÊTÂ (GASU KUROMATOGURAHU SITURYÔ BUNSEKI KEI NO)	A part, at which a gas chromatograph is connected to a mass spectrometer, for concentration of an analytical sample by separating most of carrier gas.	separator (of gas chromatograph/mass spectrometer)
4034	全イオンクロマトグラム	ZEN ION KUROMATOGURAMU	A chromatogram which is produced with an ion source, or otherwise in which total number of ion of mass charge ratio is successively detected to be recorded.	total ion chromatogram
4035	前駆イオン	ZENKU ION	When a certain ion or a neutral chemical species is generated, an original ion is meant.	precursor ion
4036	選択イオン検出	SENTAKU ION KENSYUTU	Continuous detection of a specific mass number of ions.	selected ion detection ; SID, selected ion monitoring ; SIM
4037	相対感度係数	SÔTAI KANDO KEISÛ	A relative intensity of the spectral line of each element when one of spectral lines of a certain element is taken as a reference (1.00) in a spark ion source mass spectrometry.	relative sensitivity coefficient
4038	大気圧イオン化, API	TAIKIATU IONKA, Ê-PÎ-AI	A kind of chemical ionization which is performed in a flow of gas at one atmospheric pressure.	atmospheric pressure ionization ; API
4039	単収束形質量分析計	TAN SYÛSOKUGATA SITURYÔ BUNSEKI KEI	A mass spectrometer of a system in which only the direction focusing of an ion beam is performed by using a single magnetic field. A uniform magnetic field which is sectorial is generally used.	single-focusing mass spectrometer
4040	タンデム質量分析, MS/MS	TANDEMU SITURYÔ BUNSEKI, EMU-ESU-BAI-EMU-ESU	An method in which the same kind or different kind of mass spectrometers are connected in series, the one among of the ion species generated in the first ionization chamber is selected as a precursor ion and the product ion generated from the decomposition of the precursor ion is detected by the second mass spectrometer.	tandem mass spectrometry ; MS/MS

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4041	タンデム質量分析計	TANDEMU SITURYÔ BUNSEKI KEI	A mass spectrometer in which a collisional activation chamber is provided between the first and the second in order to carry out the tandem mass spectrometry.	tandem mass spectrometer
4042	断熱イオン化	DANNETU IONKA	A phenomenon in which the ion having the same structure as the molecule is generated by adding or removing electron to molecule.	adiabatic ionization
4043	転位イオン	TEN'I ION	An ion which is generated by rearrangement of an atom or an atomic group in the ion when the ion is cleft.	rearrangement ion
4044	電界脱離, フィールドデソープ ション	DENKAI DATURI, FÎRUDO DESÔPUSYON	Generation of an ion in a gas phase by a high electric field from an analytical sample coated on an emitted.	field desorption ; FD
4045	電子衝撃イオン化	DENSI SYÔGEKI IONKA	Ionization by bombarding an analytical sample molecule with an electron current.	electron impact ; EI
4046	電場走査	DENBA SÔSA	A scanning which is performed by varying the intensity of an electric field in order to measure a mass spectrum.	electric field scanning
4047	同位体	DÔITAI	A series of atoms which are the elements of same atomic number and different number of mass.	isotope
4048	同位体イオン	DÔITAI ION	An ion which is generated by isotope.	isotopic ion
4049	二重収束形質量分析計	NIZYÛ SYÛSOKUGATA SITURYÔ BUNSEKI KEI	A mass spectrometer of a system in which the direction focusing and speed focusing of an ion beam is performed by using the combination of a magnetic field and an electric field.	double-focusing mass spectrometer
4050	反応イオン	HANNÔ ION	An ion which is useful for ionization of an analytical sample in a chemical ionization method.	reactant ion
4051	ビームモニター	BÎMU MONITÂ	An electrode or a mechanism for measurement of an ion amount by receiving a part of an ion beam before the ion beam enters the electrode or the mechanism.	beam monitor ; BM

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4052	飛行時間形質量分析計, TOF-MS	HIKÔZIKANGATA SITURYÔ BUNSEKI KEI, TÊ-Ô-EHU HAIHUN EMU-ESU	A mass spectrometer of a system in which an ion is made incident in a pulse state and the ion is separated according to a mass-to-charge ratio by the difference of a flying speed.	time-of-flight mass spectrometer ; TOF-MS
4053	ファラデーカップコレクター	FARADÊ KAPPU KOREKUTÂ	An electrode of a cup state for measurement of an ion beam.	faraday cup collector
4054	フィールドイオン化, 電界イオン化	FÎRUDO IONKA, DENKAI IONKA	Ionization of an analytical sample molecule in a high electric field which is generated at the sharpened tops of an edge.	field ionization
4055	付加イオン	HUKA IONKA	An ion which is generated by the additional reaction of an ion and a molecule in an ionization chamber.	adduct ion
4056	フラグメンテーション	HURAGUMENTÊSYON	A reaction which an ion produces an ion of small mass by one or several cleavages.	fragmentation
4057	フラグメントイオン	HURAGUMENTO ION	An ion which is produced by cleavage of a molecular ion or the like.	fragment ion
4058	プリカーサーイオン, 親イオン	PURIKÂSÂ ION, OYA ION	An original ion when a molecular ion or a fragment ion is further cleft to produce the fragment ion.	precursor ion, parent ion
4059	プロダクトイオン	PURODAKUTO ION	An ion which is produced by the cleavage of precursor ion (parent ion). It is the antonym of precursor ion.	product ion
4060	分解能(質量分析の)	BUNKAINÔ (SITURYÔ BUNSEKI NO)	Mass spectrometry's capability to isolate adjacent two spectrum.	resolution (of mass spectrometry)
4061	分子イオン(質量分析の)	BUNSI ION (SITURYÔ BUNSEKI NO)	Generic term for those molecules which were ionized.	molecular ion (of mass spectrometry)
4062	ペニングイオン化	PENINGU IONKA	Ionization of an analytical sample by a neutral atom or molecule which is under an excitation state.	penning ionization

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4063	方向収束 マ質量分析計, MIP-MS	HÔKÔ SYÛSOKU	A phenomenon wherein ion beams which are accelerated to be emitted from one point, of which the mass-to-charge ratios and energy are equal, and of which directions are slightly different are again focused on one point. A uniform magnetic field which is sectorial is generally used for this purpose.	direction focusing
4064	マイクロ波誘導プラズマ質量分析計, MIP-MS	MAIKUROHA YÛDÔ PURAZUMA SITURYÔ BUNSEKI KEI, EMU-AI-PÎ HAIHUN EMU-ESU	A mass spectrometer in which the analyte is ionized by utilizing the microwave induced plasma generated by the induction of high frequency power and the ion generated is analyzed.	microwave induced plasma mass spectrometer ; MIP-MS
4065	マスクロマトグラフ フィー	MASU KUROMATO- GURAFÎ	A diagram wherein in a gas chromatograph mass spectrometer plotting mass spectrogram in every certain time interval, record mass number of ion intensity versus time in abscissa axis.	mass chromatography ; MC
4066	マスフラグメントグラフ フィー	MASU HURAGU- MENTOGURAFÎ	A generic terms for a method in which only a specific mass number of ion is detected to be recorded in real time by a selected ion detection.	mass fragmentography ; MF
4067	マトリックス(質量分析の)	MATORIKKUSU (SITURYÔ BUNSEKI NO)	A medium for holding the sample for the purpose of carrying out ionization.	matrix (of mass spectrometry)
4068	MALDI	MARUDEÎ	A phenomenon of ionization in which ion is held in matrix, and the ionization of sample, and desorption from matrix are generated by laser.	matrix-assisted laser desorption/ionization ; MALDI
4069	誘導結合プラズマ質量 分析計, ICP-MS	YÛDÔ KETUGÔ PURAZUMA SITURYÔ BUNSEKI KEI, AI-SÎ-PÎ HAIHUN EMU- ESU	A mass spectrometer in which the analyte is ionized by utilizing the plasma generated by coupling high frequency power inductively and the ion generated is analyzed.	inductively coupled plasma mass spectrometer ; ICP-MS

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4070	リペラー電極	RIPERÂ DENKYOKU	An electrode for pushing out an ion from the ionization chamber of a mass spectrometer to a part (an analyzer) in which the mass separation of the ion is performed.	repeller electrode
4071	リンク走査	RINKU SÔSA	Simultaneous scanning of the electric field and magnetic field of a mass separation part following a specific system in order to detect only a specific ion in the mass spectrometer having a part (an analyzer) in which the mass separation of not less than two ions is performed.	linked scanning
4072	レーザー脱離	RÊZÂ DATURI	A method in which an analytical sample ion of a gas phase is obtained by irradiation of a laser beam on a solid sample. It is also used for gasification of the solid sample.	laser desorption ; LD
4073	レンズ電極	RENZU DENKYOKU	An electrode to introduce ions which have been ionized in ionizing chamber to mass spectrometer.	lens electrode

b) X-ray analytical instrument

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4101	アングルマーク	ANGURU MÂKU	A record of the signal of an angle from a goniometer.	angle mark ; event mark
4102	一次ターゲット	ITIZI TÂGETTO	A target which is used for the purpose of generating the fluorescent X-ray (characteristic X-ray) capable of exciting analytical line effectively.	primary target
4103	一次フィルター	ITIZI FIRUTÂ	A filter which is inserted between the excited X-ray source and the analytical sample for the purpose of changing the spectral distribution of excited X-ray.	primary beam filter
4104	位置敏感形比例計数管 (X線の)	ITI BINKANGATA HIREI KEISÛKAN (EKKUSUSEN NO)	A proportional counter with which incidence positional information of X-ray can be obtained.	position sensitive proportional counter (of X-ray)

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4105	イメージングプレート, IP	IMÊZINGU PURÊTO, AI-PÎ	A storage medium in which the accelerated fluorophor (BaFBr : Eu ²⁺) is coated on film.	imaging plate ; IP
4106	エスケープピーク (例計数管の)	ESUKÊPU PÎKU (HIREI KEISÜKAN NO)	A peak which appears in a pulse-height distribution curve when the energy of incident X-ray becomes larger than the energy at absorption edge of photon absorber of counter tube.	escape peaks (of proportional counter)
4107	X線回折装置	EKKUSUSEN KAISETU SÔTI	An instrument with which the diffraction angle and intensity of a diffracted X-ray by a sample are recorded.	X-ray diffractometer
4108	X線回折法	EKKUSUSEN KAISETU HÔ	A method in which the structure analysis of crystal is carried out by using that the characteristic diffraction pattern of the crystal is obtained according to Bragg reflection condition or Laue diffraction condition when X-ray is irradiated to crystal.	X-ray diffraction ; XRD
4109	X線管球	EKKUSUSEN KANKYÛ	A vacuum tube for generation of an X-ray. It is one kind of a thermo-ionic diode and there are a sealed system and an open system.	X-ray tube
4110	X線吸収端近傍構造, XANES	EKKUSUSEN KYÛSYÛTAN KINBÔ KÔZÔ, ZÂNESU	A microstructure which is observed in the domain from approximately 10 eV at the side of long wavelength (low energy part) from absorption edge to 30 eV at the side of short wavelength (high energy part) in X-ray absorption spectrum.	X-ray absorption near-edge structure ; XANES
4111	X線発生装置	EKKUSUSEN HASSEI SÔTI	An instrument for generation of X-ray, which is composed of an X-ray tube and a high voltage generation part, etc.	X-ray generator
4112	X線フィルター	EKKUSUSEN FIRUTÂ	A thin film for taking out X-ray in a required energy region by utilizing an absorption end. There are a K β filter, a balanced filter, etc.	X-ray filter
4113	エネルギー分散形 X線分析法	ENERUGÎ BUNSA NGATA EKKUSUSEN BUNSEKI HÔ	A system in which X-ray energy is converted directly to an electric pulse to be selected and spectral diffraction is performed.	energy dispersive X-ray spectroscopy

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative)
4114	ガイガー計数管	GAIGÁ KEISŪKAN	Gaseous counter tube to detect radioactive ray utilizing gaseous discharge induced by radioactive ray.	Geiger-Müller counter
4115	回転振動試料台	KAITEN SINDŌ SIRYŌ DAI	An instrument with which an influence on a diffracted X-ray intensity by orientation is standardized by making a sample rotate and oscillate around two axis crossing at right angles.	specimen rotation oscillation attachment
4116	ガスデンスンテイスター ライザー	GASU DENSITĪ SUTABIRAIZA	An instrument with which a gas density is kept constant against variation of atmospheric pressure and temperature for the purpose of stable measurement of an X-ray intensity with a gas counting tube.	gas density stabilizer
4117	数え落とし	KAZOE OTOSI	A phenomenon in which a proportional relation between the incident X-ray intensity and the measured counting rate collapses when the X-ray intensity is measured at a high counting rate.	counting loss
4118	干渉性散乱	KANSYŌSEI SANRAN	A scattering which is the X-ray scattered when X-ray is entered to a substance and has the same wavelength as the incident X-ray. It is also called as elastic scattering.	coherent scattering
4119	ギニエカメラ	GINIE KAMERA	A kind of a focusing X-ray camera with which a diffracted X-ray is detected by placing a film on a focal circle.	Güinier camera
4120	吸収効果 (X線分析の)	KYŪSYŪ KŌKA (EKKUSESEN BUNSEKI NO)	A phenomenon in which X-ray is absorbed in the analytical sample and the diffraction X-ray strength is decreased.	absorption effect (of X-ray analysis)
4121	極点図	KYOKUTEN ZU	A figure in which the position of pole on the specific crystal surface and the distribution of density are stereographically projected in relation to the surface vertical to a certain direction in the analytical sample.	pole figure
4122	クエンチガス	KUENTI GASU	A gas which is mixed in order to quench successive discharge in measurement of an X-ray with a gas counting tube.	quenching gas