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International journal devoted to all branches of analytical chemistry

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ANALYTICA CHIMICA ACTA

*International journal devoted to all branches of analytical chemistry
 Revue internationale consacrée à tous les domaines de la chimie analytique
 Internationale Zeitschrift für alle Gebiete der analytischen Chemie*

PUBLICATION SCHEDULE FOR 1983

	J	F	M	A	M	J	J	A	S	O	N	D
Analytica Chimica Acta	145	146	147	148	149	150/1 150/2	151/1	151/2	152	153	154	155

Scope. *Analytica Chimica Acta* publishes original papers, short communications, and reviews dealing with every aspect of modern chemical analysis, both fundamental and applied.

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Publication. *Analytica Chimica Acta* appears in 11 volumes in 1983. The subscription for 1983 (Vols. 145–155) Dfl. 1980.00 plus Dfl. 220.00 (postage) (total approx. U.S. \$880.00). Journals are sent automatically by airmail to U.S.A. and Canada at no extra cost and to Japan, Australia and New Zealand for a small additional postal charge. Earlier volumes (Vols. 1–144) except Vols. 23 and 28 are available at Dfl. 200.00 (U.S. \$80.00), plus Dfl. 15.00 (U.S. \$6.00) postage and handling, per volume.

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Extraction (%)	95.0	99.8	99.5	89.0

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Basic SI and other accepted metric nomenclature are given in the Appendix. In accordance with IUPAC rules, the mass number, atomic number, number of atoms and ionic charge should be designated by a left upper index, a left lower index, a right lower index and a right upper index, respectively, placed round the atomic symbol. For example, the phosphate ion should be designated as PO_4^{3-} (not PO_4^{-3} or PO_4^{---}), and phosphorus-32 as ^{32}P (not P^{32} or P-32).

The Stock notation for the indication of stoichiometric valency states (and indirectly the proportion of the constituents) should be used. Examples are iron(III) chloride rather than ferric chloride, and potassium hexacyanoferrate(II) rather than potassium ferrocyanide. These rules are valid for French and German as well as English usage.

The use of nanometre (nm) and micrometre (μm) for the expression of analytical wavelengths has long superseded $m\mu$ or \AA or μ , all of which should be avoided, although \AA is sensibly retained in crystallographic work.

Natural or Napierian logarithms should be denoted by \ln and decadic logarithms by \log .

Molarity (mol l^{-1} or M) is the preferred concentration unit, but normality (N) can be used for convenience if it does not introduce ambiguity.

Unusual abbreviations require definition when first used. Abbreviations for long chemical names (e.g., EDTA, HEDTA, TBAH, en, pn, Tris) are useful, especially in equations, tables or figures. For ease of distinction, well-known techniques may be abbreviated by using lower-case letters and full stops, such as, g.c.-m.s., u.v., i.r., a.a.s., ^{13}C -n.m.r., a.s.v., d.p.p., etc. In the interests of clarity, however, excessive use of abbreviations is not encouraged.

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Decimal points should be indicated by full stops in papers written in English and by commas in French and German papers. All decimal numbers smaller than unity should include a leading zero (e.g., 0.11).

Appendix

Basic SI units

metre	m	candela	cd
kilogram	kg	mole	mol
second	s	(an Avogadro number of particles such as atoms, molecules, ions, electrons.)	
ampere	A		
degree Kelvin	K		

Derived SI units

joule	J	$\text{kg m}^2 \text{s}^{-2}$	farad	F	A s V^{-1}
newton	N	J m^{-1}	weber	Wb	V s
watt	W	J s^{-1}	henry	H	V s A^{-1}
coulomb	C	A s	tesla	T	V s m^{-2}
volt	V	$\text{J A}^{-1} \text{s}^{-1}$	hertz	Hz	s^{-1}
ohm	Ω	V A^{-1}	degree Celsius	$^{\circ}\text{C}$	K - 273.15

Other units

litre	l	10^{-3} m^3	hour	h	$3.6 \times 10^3 \text{ s}$
gram	g	10^{-3} kg	dyne	dyn	10^{-5} N
poise	P	$10^{-3} \text{ m}^{-1} \text{ s}^{-1}$	atmosphere	atm	$101.325 \text{ kN m}^{-2}$
electron volt	eV	$1.6021 \times 10^{-19} \text{ J}$	molar	M	mol l^{-1}
calorie	cal	4.184 J	molal	m	mol kg^{-1}
minute	min	60 s	curie	Ci	$3.7 \times 10^{10} \text{ s}^{-1}$

Prefixes to abbreviations for the names of units indicating

Multiples	Sub-multiples				
tera ($\times 10^{12}$)	T	milli ($\times 10^{-3}$)	m	pico ($\times 10^{-12}$)	p
giga ($\times 10^9$)	G	micro ($\times 10^{-6}$)	μ	femto ($\times 10^{-15}$)	f
mega ($\times 10^6$)	M	nano ($\times 10^{-9}$)	n	atto ($\times 10^{-18}$)	a
kilo ($\times 10^3$)	k				

ATOMIC ABSORPTION SPECTROMETRY

edited by

J. E. CANTLE

*VG Isotopes Ltd., Winsford,
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Techniques and Instrumentation in Analytical Chemistry Vol. 5

Atomic absorption spectroscopy is now established as one of the most useful tools for analysing trace metals in samples which may be taken into solution. It has wide applicability, is inexpensive and can be used with confidence by a wide range of analysts. The rapid growth and advancement of electrothermal atomisation methods and their subsequent automation has consolidated the technique's position by extending the dynamic analytical range down to concentration levels that other techniques cannot reach.

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ERICH HEFTMANN, U.S. Department of Agriculture, Berkeley, CA, U.S.A. (editor)

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0003-2670/83/\$03.00

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