

physical sciences data 28

liquid-liquid

equilibrium and

extraction

a literature source book

supplement 2

jaime wisniak and abraham tamir

elsevier

28

BUFFER
PARAFFIN OIL

BENZENE

DIPENTYLNAPHTHALEN

WATER

and

ISOOCTANE
DEUTERIUM OXIDE

ISOCTANE
WATER

BENZENESULFONAMIDE

CHLOROFORM
WATER

DIETHYL ETHER

HYDROXYBENZENESULFONAMIDE

CHLOROFORM
WATER

DIETHYL ETHER
WATER

SULFANILIC ACID

METHYL ISOBUTYL KET
WATER

4-METHYL-2-PENTANOL
WATER

ISOMIA

BASIC MEDIUM
CHLOROFORM

ISONICOTINIC ACID HYDRAZIDE

OCTANOL WATER

1-HEXYNE

METHANE

WATER

1,4-CYCLOHEXADIENE

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*Department of Chemical Engineering,
Ben-Gurion University of the Negev, Beer-Sheva 84105, Israel*



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בני הזהר עשות ספרים הרבה
אין קץ ולהג הרבה יגעת בשר

קוהלת י"ב

My son take care:
Of making many books there is no limit
And much studying is a weariness of the flesh

Ecclesiastes 12:12

To

Anita, Daniel, Debora, Miriam and Ariel Wisniak
Dalia, Idan, Guy and Hadas Tamir

PREFACE

This is the second supplement to the literature source book "Liquid-Liquid Equilibrium and Extraction", which covered the period from 1900 to 1981 and was published in 1980-1981 by Elsevier. The first supplement covered the literature that appeared between 1981 and 1984. The present volume covers the period 1984-1986.

We expect this literature source to be useful to people working in chemistry, chemical and metallurgical engineering, biology, medicine, and pharmacy.

We would like to express our thanks to Ben-Gurion University of the Negev for providing encouragement and generous assistance, to the Computation Center for their technical help, and, in particular, to our assistants Yehudit Reizner and Moshe Golden for long devoted hours for processing the data.

JAIME WISNIAK
ABRAHAM TAMIR

Beer-Sheva, October 1986

באר-שבע, ערב ראש השנה תשמ"ז

GUIDE TO TABLES

The sequence of systems in the Tables is based on the empirical convention used in Chemical Abstracts. The compounds are arranged in order of increasing C and H, with the remaining compounds in alphabetical order. For a given leading compound, the binaries are reported first, followed by ternary, quaternary, etc. systems. In order to save space the cross reference has been divided in two categories: (1) for simple liquid-liquid equilibrium a particular system may be reached through any of its components, (2) for extraction data, reference is made only to the compound(s) being extracted. At the end of the book the solvents are again listed together with the global formula of the solutes for which data are available.

An arbitrary classification formula has been assigned to those compounds that do not have a specified composition, or to the few that have too long a global formula. A dictionary is provided for their identification. The reader is requested to familiarize himself with the dictionary before using the tables. Many references do not identify the isomer, hence the reader is advised to check all the components having the same global formula.

All references are provided with their Chemical Abstract numbers. This should prove useful for journals that are difficult to obtain.

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AC120	ACETATE SOLUTION
AC130	ACETIC ACID CHLORO-SUBSTITUTED
AC160	ACID MEDIUM
AC190	ACIDS
AC194	ACORGA P50
AC200	ACRIFLAVINE
AD146	ADIPOSE TISSUE
AD147	ADOGEN 115-D
AD148	ADOGEN 283
AD150	ADOGEN 363
AD200	ADOGEN 464
AI100	AIR
AL102	ALAMINE 304
AL110	ALAMINE 336
AL130	ALBUMIN
AL141	ALCOHOL DEHYDROGENASE
AL160	ALCOHOLS
AL210	ALCOHOLS C5-C9
AL216	ALCOHOLS C7-C9
AL232	ALDOLASE
AL240	ALIPHATIC ACIDS
AL250	ALIPHATIC ACIDS C7-C9
AL270	ALIPHATIC ALCOHOLS
AL320	ALIPHATIC AMINES MIXTURE
AL400	ALIQUT 336
AL415	ALIQUT 336-ON
AL420	ALIQUT 336-S
AL505	ALKALIMETALS PICRATES
AL531	ALKYL BENZYL ETHERS
AL720	ALKYLPHENOLS
AL812	ALPHA-CHYMOTRYPSIN
AL827	ALPHA-FETOPROTEIN
AM050	AMARANTH
AM100	AMBERLITE LA-1
AM110	AMBERLITE LA-2
AM115	AMBERLITE LA-3
AM130	AMBERLITE XE-204
AM136	AMBERLYST-A 26
AM137	AMBERLYST-XE 270
AM138	AMBERLYST-15
AM182	AMINES UNSATURATED
AM219	AMINO ACIDS
AM225	AMMONIA SOLUTION
AM244	AMMONIUM SALTS
AM350	2-AMINO-4-TRIFLUOROMETHYLBENZENESULFON (DIETHYLACETO) AMIDE
AM360	2-AMINO-4-TRIFLUOROMETHYLBENZENESULFON (DIMETHYLACETO) AMIDE
AN110	ANIONIC SURFACTANTS
AN120	ANIONS
AN159	ANTI-BETA-MICROGLOBULIN
AN200	4-ANTIPYRYL AMIDOPHOSPHORIC ACID DIBUTYL ESTER
AP105	APATITE LEACHING LIQUOR
AQ104	AQUEOUS AMMONIUM NITRATE
AQ110	AQUEOUS CHLORIDE SOLUTION
AQ140	AQUEOUS ETHANOL
AQ160	AQUEOUS HYDROGEN CHLORIDE
AQ170	AQUEOUS IODIDE SOLUTION
AQ210	AQUEOUS LITHIUM CHLORIDE
AQ230	AQUEOUS LITHIUM NITRATE
AQ235	AQUEOUS NITRIC ACID
AQ250	AQUEOUS PERCHLORATE SOLUTION
AQ260	AQUEOUS PHOSPHATE SOLUTION

AQ270	AQUEOUS PHOSPHORIC ACID
AQ300	AQUEOUS POTASSIUM CHLORIDE
AQ304	AQUEOUS POTASSIUM IODIDE
AQ310	AQUEOUS POTASSIUM NITRATE
AQ340	AQUEOUS SULFATE SOLUTION
AQ345	AQUEOUS SULFURIC ACID
AR107	ARLACEL 80
AR108	ARLACEL 85
AR170	ARSENazo III
AR200	A101DU RESIN
AR210	A365 RESIN
AR220	A368 RESIN
AR230	A7 RESIN
BA200	BASIC MEDIUM
BA230	BAUXITE
BB100	B-312
BE161	BENZYL PENICILLIN SODIUM
BE220	BETA-LACTOGLOBULIN
BE230	BERYLLON II
BE240	BETA-MICROGLOBULIN
BL100	BLOOD
BL110	BLOOD CELLS
BL130	BLOOD COMPONENTS, HUMAN
BL180	BLOOD, HUMAN
BO120	BOVINE SERUM ALBUMIN
BP100	BPMC
BR122	BRIJ 35
BR123	BRIJ 30
BR124	BRIJ 58
BR125	BRIJ 78
BR130	BROMIDE SOLUTION
BR210	1-(3-BROMO)PHENOXY SILATRANE
BU100	BUFFER
CA126	CADMIUM N-ETHYL-N-HYDROXYETHYLDITHIOCARBAMATE
CA127	CADMIUM N-METHYL-N-HYDROXYETHYLDITHIOCARBAMATE
CA128	CADMIUM N,N-BIS (BETA-HYDROXYETHYL) DITHIOCARBAMATE
CA260	CESIUM-SODIUM-POTASSIUM ACETATE EUTECTIC
CA270	CARBOXYLIC ACIDS
CA320	CASEIN
CA370	CATIONS
CA400	CALCIUM-MAGNESIUM ATPASE
CA410	CARDIOLIPIN
CE165	CEPHALIN
CH050	CHEVRON 25
CH350	CHLORMERODRIN
CH400	1-(3-CHLORO)PHENOXY SILATRANE
CH410	1-(4-CHLORO)PHENOXY SILATRANE
CL100	CLOMETHOCILLIN
CL120	CLOXACILLIN
CL140	CLOBETASOL
CL150	CLOBETASOL-17-BUTYRATE
CL160	CLOBETASOL-17-PROPIONATE
CL170	CLOBETASOL-17-PROPIONATE (CL)
CL180	CLOBETASOL-17-PROPIONATE (F)
CL190	CLOBETASONE
CL200	CLOBETASONE-17-BUTYRATE
CL210	CLOBETASONE-17-PROPIONATE
CL220	CLOBETASONE-17-PROPIONATE (BR)
CL230	CLOBETASONE-17-PROPIONATE (F)
CL240	CLOBETASONE-17-PROPIONATE (H)

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CU130	CUPRIC THENOYLTRIFLUOROACETONATE
DE130	DEXTRAN
DE135	DEXTRAN 500
DE160	DEXTRAN T40
DI240	DICLOXACILLIN
DI241	1-(2,6-DICHLORO)PHENOXYISILATRANE
DI242	1-(3,5-DICHLORO)PHENOXYISILATRANE
DI470	DIVINYLBENZENE-STYRENE COPOLYMER
DI500	DIALKYL ACETYLBUTYRATE TIN
DI510	1,3-DIOLS
DI520	1,3-DIOLS C9-C11
DI530	2-DIETHYLACETOAMIDE-4-CHLOROBENZENESULFONAMIDE
DI540	2-DIETHYLACETOAMIDE-4-TRIFLUOROMETHYLBENZENESULFONAMIDE
DI550	2-DIMETHYLACETOAMIDE-4-CHLOROBENZENESULFONAMIDE
DI560	2-DIMETHYLACETOAMIDE-4-TRIFLUOROMETHYL-BENZENESULFONAMIDE
DI570	2,2-DIALKYLMONOCARBOXYLATE ANION
DI580	3-(4,5-DIMETHYL-2-THIAZOLYAZO)-2,6-DIAMINOPYRIDINE
DI590	4-DIMETHYLAMINOAZOBENZENE-4-SULFONYL CHLORIDE
DI600	4,6-DICHLORO (ETHOXZOLAMIDE)
DI610	DIHYDROERGOTOXINE
DI620	DIMETHYL FATTY AMINE
DI630	DIPALMITOYL-N-METHYL-CEPHALINE
DI640	DIPALMITOYLLECITHIN
DO107	DOWEX 1X8
DO108	DOWEX 4X4
DO111	DOWEX 50WX8
DT100	DTPA
EG110	EGG PHOSPHATIDYLCHOLINE
EL100	ELECTROLYTES
EM100	EMPOL 1014
EM110	EMULGEN 120
EM120	EMULGEN 147
EN100	ENOLASE
EP110	EPN
ER060	ERIOCHROME BLACK T
ER110	ERYTHROCYTES
ES110	ESCAID 110
ET060	ETHER ESTER AMIDE COPOLYMER
ET120	ETHYLENE-PROPYLENE COPOLYMER
ET130	ETHYLENE-VINYL ACETATE COPOLYMER
ET250	ETHYLMERCURY GLUTATHIONE
ET260	1-(1-ETHOXYETHYL)CYSTOSINE
FA140	FATTY ACIDS C7-C9
FA160	FATTY ACIDS C17-C20
FL130	FLUORIDE SOLUTION
FL200	FLUOSOL-DA
FU106	FUROSEMIDE
GA200	GALLIUM PYRIDYLAZONAPHTHOLATE
GL150	GLUCOSE 6-PHOSPHATE DEHYDROGENASE
GL160	GLYCERIDE 3-PHOSPHATE DEHYDROGENASE
GR120	GREEN H-E4BD
HA155	HALQUINOL
HE100	HEAVY OIL
HE105	HEMATITE FINE PARTICLES
HE180	HEXOKINASE
HI120	HITACHI 2611
HU005	HUMAN BLOOD PERIPHERAL
HU025	HUMAN LIVER HOMOGENATE
HU100	HUMAN ERYTHROCYTES
HU107	HUMAN RED BLOOD

XIV

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HY100	HYAMINE-1622
HY172	HYDROQUINONE COMPLEXONE
HY225	HYDROXYPROPYLMETHYL CELLULOSE
HY270	3-(1-HYDROXYETHYL)-2,6-ALKANEDIOL (C6-C8)
IB100	IBP
IN140	INORGANIC ANIONS
IN155	INTERFERON HUMAN FIBROBLAST
IO106	IODONITROTETRAZOLIUM CHLORIDE
IO110	IONS
IR256	IRA93 RESIN
IR260	IRA400 RESIN
IR270	IRON 2-(2-THIAZOLYLAZO)-4-TERT-OCTYLPHENOL
IS120	ISOPAR-H
IS130	ISOPRENOID AMINES
KE100	KELEX-100
KE120	KEROSENE
KE130	KEROSENE FRACTIONS
KE135	KETAMINE AB
LE110	LECITHIN
LE130	LEPTOPHOS INSECTICIDE
LI180	LIPOPROTEINS
LI265	LITHIUM FLUORIDE-BERYLLIUM FLUORIDE MOLTEN SALT
LI322	LIX 34
LI325	LIX-54
LI330	LIX-63
LI350	LIX-64N
LI360	LIX-65N
LI370	LIX-70
LI400	LITHIUM SALTS SOLUTION
LY100	LYSOZYME
LY110	LYSOPHOSPHATIDYLCHOLINE
MA160	MASKING AGENTS
ME050	MEDIUM ACTIVITY WASTE
ME105	MEMBRANE
ME107	MEMBRANE, COLINE SUPPLEMENTED
ME108	MEMBRANE, ETHANOLAMINE SUPPLEMENTED
ME161	MEPAMIN
ME170	METAL CATIONS
ME182	METANIL YELLOW
ME250	METHYL ORANGE
ME301	METHYLCLOTHIAZIDE
ME321	METHYLMERCURY GLUTATHIONE
ME400	1-(3-METHYL-4-CHLORO)PHENOXYISILATRANE
MI060	MICROSOMAL MEMBRANES
MI123	MITOCHONDRIA
MO204	MONOTHIONAPHTHENIC ACID
MY040	MYCOBACTERIUM PHLEI
MY045	MYELIN
MY100	MYOGLOBIN
NA200	NAPHTHENIC ACIDS
NA240	NAVY H-4R
NE230	NEORSIN I
NE240	NEORSIN II
NE250	NEORSIN III
NE260	NEUTRAL RED TRIOCTYLBENZENESULFONATE
NI160	NITRATE SOLUTION
NI165	NITRATE PEROXIDE SOLUTIONS
NI180	NITRITE SOLUTION
NI250	NITROSO-R-SALT
NI270	NITRO BLUE TETRAZOLIUM CHLORIDE

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NI280	2-NITRO-4-TRIFLUOROMETHYLBENZENESULFON (DIMETHYLACETO) AMIDE
NI290	3- (M-NITROPHENYL) -2, 5-DIPHENYLTETRAZOLIUM BROMIDE
NN100	N1923
NN110	N235
NN120	N263
NO125	NONYLPHENOLETHOXYLATE NONIONIC SURFACTANTS
NO140	NORAMIDOPYRINE METHANESULFONATE
OI100	OILS
OL130	OLIVE OIL
OL150	OLIVE MX-3G
OR050	ORANGE H-ER
OV100	OVALBUMIN
PA150	PARAFFIN
PA155	PARAFFIN MIXTURE
PA210	P-ALKYLPHENOLS C4-C8
PA220	PAR
PE101	PEANUT OIL HYDROGENATED
PE140	PERCHLORATE OR SULFATE SOLUTION
PE151	PERITOL
PE260	PETROLEUM SULFOXIDES
PE270	1-PERCHLOROPHENOXYLSILATRANE
PH100	PH RANGE
PH120	PHENOLS
PH125	PHENOLS HIGH BOILING POINT MIXTURES
PH165	PHENYLMERCURY GLUTATHIONE
PH198	PHOSPHATIDIC ACID
PH200	PHOSPHATIDYLCHOLINE
PH205	PHOSPHATIDYLETHANOLAMINE
PH270	PHOSPHOLIPIDS
PH320	1-PHENYL-4-METHYL-4-METHOXY-1, 3-ALKYLDIONE
PH330	3-PHOSPHOGLYCERATE KINASE
PH400	PHOSPHATIDYLINOSITOL
PH410	PHOSPHATIDYLSERINE
PH420	PHOSPHOFRUCTOKINASE
PH430	PHOSPHOGLYCERATE MUTASE
PI050	PICRATE SOLUTION
PL100	PLASMA
PL103	PLASMA MEMBRANES
PO100	POLYACRYLAMIDE
PO109	POLYACRYLATE-D 340
PO133	POLYALKYLPHOSPHONITRILE ACID
PO140	POLYBUTADIENE
PO160	POLYCAPROLACTAM
PO170	POLYCARBONATE
PO200	POLYETHYLACRYLATE
PO210	POLYETHYLENE
PO226	POLYETHYLENE GLYCOL BUTYL ETHER
PO227	POLYETHYLENE GLYCOL OCTYL ETHER
PO237	POLYETHYLENE GLYCOL 600, METHOXYLATED
PO238	POLYETHYLENE GLYCOL 1550
PO239	POLYETHYLENE GLYCOL 2000
PO241	POLYETHYLENE GLYCOL 6000
PO242	POLYETHYLENE GLYCOL 8000 OCTADECYL ETHER
PO243	POLYETHYLENE GLYCOL 8000 STEARATE
PO244	POLYETHYLENE GLYCOL ETHERS
PO250	POLYETHYLENE GLYCOL PALMITATE
PO260	POLYETHYLENE GLYCOLS
PO330	POLYISOBUTENE
PO360	POLYMETHYLACRYLATE
PO370	POLYMETHYLMETHACRYLATE

PO375	POLYMETHYL ACRYLAMIDE BENZO-15-CROWN-5
PO376	POLYMETHYL ACRYLAMIDE BENZO-18-CROWN-6
PO401	POLYETHYLENE OXIDE 100
PO402	POLYETHYLENE OXIDE 400
PO403	POLYETHYLENE OXIDE 1000
PO404	POLYETHYLENE OXIDE 1500
PO405	POLYETHYLENE OXIDE 3000
PO460	POLYOXYETHYLENE LAURYL ETHER
PO476	POLYOXYETHYLENE NONYLPHENYL ETHER
PO530	POLYPROPYLENE
PO541	POLYPROPYLENE GLYCOL 400,METHOXYLATED
PO542	POLYPROPYLENE GLYCOL 1000,METHOXYLATED
PO543	POLYPROPYLENE GLYCOL 1500,METHOXYLATED
PO544	POLYPROPYLENE GLYCOL 2000,METHOXYLATED
PO600	POLYSTYRENE
PO630	POLYURETHANE FOAM
PO651	POLYVINYL ALCOHOL-CO-ACETATE
PO652	POLYVINYLPIRIDINE
PO665	POLYVINYL CHLORIDE
PO680	POLYVINYLMETHYL ETHER
PO710	POLYVINYLPIRROLIDONE
PO733	POLY(METHYLVINYL ETHER)
PO792	POLY(DECYL METHACRYLATE)
PO793	POLY(O-CHLOROSTYRENE)
PO799	POLY(2,6-DIMETHYL-1,4-PHENYLENE ETHER)
PO802	POLY(2,6-DIMETHYL-1,4-PHENYLENE ETHER) P-FLUOROSTYRENE COPOLYMER
PO904	POTASSIUM P-ALKYLPHENOLS C4-C8
PP100	P204
PR134	PRIMARY AMINE N-1923
PR136	PRIMARY AMINE N-7101
PR150	PRIMARY AMINES C10-C12
PR240	PRIMENE JM-T
PR250	PRIMENE 81-R
PR290	PROTEIN SOLUTION
PY150	PYRONINE
QU110	QUATERNARY AMMONIUM BASE SALT
QU140	QUINOLINE YELLOW
RA100	RAPESEED OIL
RA110	RARE EARTHS
RA118	RAT TISSUE
RU130	RUTHENIUM NITRATONITROSYL COMPLEX
SA050	SACCHAROMYCES CEREVISIAE
SA125	SALT SOLUTIONS
SA140	SALTING OUT AGENTS
SA150	SALTS
SA182	SARCOPLASMIC RETICULUM VESICLES
SC110	SCARLET MX-G
SE102	SECONDARY AMINE N-7203
SE106	SECONDARY AMINE N-7206
SH105	SHELLSOL K
SH110	SHELLSOL T
SI050	SILICATE IONS
SI140	SINCUMAR
SK110	SKIN MEMBRANE
SM100	SME 529
SO117	SODIUM ALKYL SULFONATE SOLUTIONS
SO160	SODIUM CHLORIDE SOLUTION
SO182	SODIUM DICLOFENAC
SO260	SODIUM SULPHATE AQUEOUS SOLUTION
SO300	SOLVENTS

=====

SO310	SOLVLESSO 100
SO320	SOYBEAN LECITHIN
SO340	SOYBEAN PROTEIN 11S FRACTIONS
SO350	SOYBEAN PROTEIN 7S FRACTIONS
SP040	SPAN 20
SP050	SPAN 80
SP125	SPHINGOMYELIN
ST130	STRONTIUM SALTS
SU160	SULFOXIDES MIXTURE
SU200	SUNAPTIC A
SY110	SYNTHETIC FATTY ACIDS
TA160	TALL OIL
TA170	TARTRAZINE
TE040	TEA LEAVES
TE111	TERPENOID AMINES
TE171	TERTIARY AMINE A 2070
TE172	TERTIARY AMINE AE 1919
TE173	TERTIARY AMINE AP 221
TE174	TERTIARY AMINE BP ANIONIC TYPE 409
TE175	TERTIARY AMINE CP 406
TE176	TERTIARY AMINE L 137
TE177	TERTIARY AMINE N-106
TE178	TERTIARY AMINE SP 169
TE179	TERTIARY AMINE Y 270
TE280	TETRAOCTYLAMMONIUM SALTS
TE330	TETRAMETHYLBISPHENOL A POLYCARBONATE(I)
TE340	TETRAPHENYLIMIDODITHIOPHOSPHATE
TE350	TETRAPHENYLIMIDODITHIOPHOSPHATE
TH130	THIOCYANATE SOLUTION
TH180	THIMEROSAL CYSTEINE
TH190	THIMEROSAL GLUTATHIONE
TI130	TIRON
TR100	TRACE METALS
TR115	TRANSFORMER DISTILLATE(285-420)
TR170	TRIALKYLAMINES
TR220	TRIALKYLAMMONIUM NITRATE
TR240	TRIALKYL BENZYLAMMONIUM CHLORIDE
TR250	TRIALKYL BENZYLAMMONIUM NITRATE
TR283	TRIALKYL METHYLAMMONIUM BASES
TR284	TRIALKYL METHYLAMMONIUM CARBONATE
TR286	TRIALKYL METHYLAMMONIUM NITRATE
TR287	TRIALKYL METHYLAMMONIUM CATION
TR288	TRIALKYL METHYLAMMONIUM CHLORIDE C8-C10
TR290	TRIALKYL METHYLAMMONIUM SULFATE
TR310	TRIALKYLPHOSPHINE OXIDE
TR318	1-(2,4,6-TRICHLORO)PHENOXY SILATRANE
TR420	TRITON X-100
TR440	TROPAEOLIN OO
TR450	TRYPSIN
TT100	T10S-1 EXTRACTANT
TU130	TURQUOISE MX-G
TW040	TWEEN 20
TW080	TWEEN 60
VE130	VERSATIC 10
VE140	VERSATIC 1519 ACIDS
VE160	VERSATIC 911 ACIDS
VI130	VINCA MINOR HERB
WA110	WASTEWATER
YE120	YELLOW HE-3G

AC ACTINIUM(III)

AC

ACTINIUM (III)

AQ235	AQUEOUS NITRIC ACID	1098
C20 H24 O6	DIBENZO-18-CROWN-6	
AQ235	AQUEOUS NITRIC ACID	1098
C20 H36 O6	DICYCLOHEXYL-18-CROWN-6	

AC200 ACRIFLAVINE

AC200

ACRIFLAVINE

C H CL3 PH100	CHLOROFORM PH RANGE	637
C4 H8 O2 PH100	ETHYL ACETATE PH RANGE	637
C6 H6 PH100	BENZENE PH RANGE	637

AG SILVER(I)

AG

SILVER(I)

AC160 AQ250 C2 H4 CL2 C23 H28 N2 O2	ACID MEDIUM AQUEOUS PERCHLORATE SOLUTION ETHYLENE DICHLORIDE 8,9;18,19-DIBENZO-1,7-DIOXA-11 ,16-DIAZACYCLONONADECA-10,16-D IENE	1141
AC160 C H CL3 C23 H28 N2 O2	ACID MEDIUM CHLOROFORM 8,9;18,19-DIBENZO-1,7-DIOXA-11 ,16-DIAZACYCLONONADECA-10,16-D IENE	1141
PI050	PICRATE SOLUTION	
AC160 C2 H4 CL2 C12 H4 N7 NA O12 C22 H26 N2 O3	ACID MEDIUM ETHYLENE DICHLORIDE SODIUM DIPICRYLAMINATE 8,9;18,19-DIBENZO-1,3,7-TRIOXA -11,16-DIAZAXYCLONONADECA-10,1 6-DIENE	1141
AC160 C2 H4 CL2 C22 H26 N2 O3	ACID MEDIUM ETHYLENE DICHLORIDE 8,9;18,19-DIBENZO-1,3,7-TRIOXA -11,16-DIAZAXYCLONONADECA-10,1 6-DIENE	1141
PI050	PICRATE SOLUTION	
AC160 C2 H4 CL2 C23 H28 N2 O2	ACID MEDIUM ETHYLENE DICHLORIDE 8,9;18,19-DIBENZO-1,7-DIOXA-11 ,16-DIAZACYCLONONADECA-10,16-D IENE	1141
PI050	PICRATE SOLUTION	