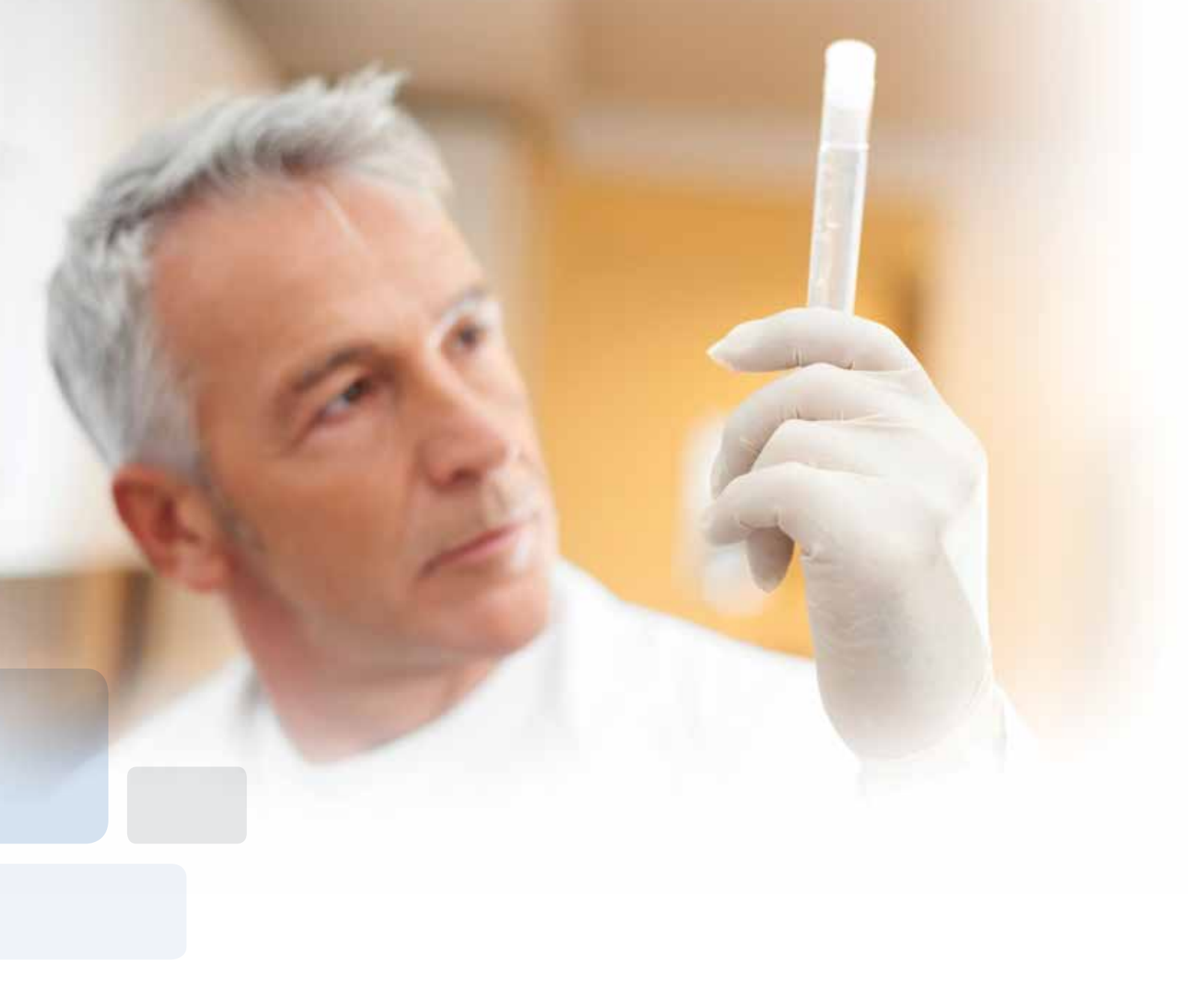


Macron Fine Chemicals™ Brand  
**HIGH PURITY  
CHEMICALS**



Part of





A unique combination of value and quality, providing the consistency, reliability and repeatability expected from a global chemical manufacturer.

## ChromAR™ Solvents

### High purity solvents for liquid chromatography applications

Avantor™ Performance Materials Macron Fine Chemicals brand ChromAR™ grade solvents are ideal for use in analytical testing in a wide variety of markets where consistency and reliability is required. These reagents are produced under strict manufacturing practices and let you perform a variety of liquid chromatography applications, with confidence in the quality of your test results.

### ChromAR Solvents Advantages

- Consistent gradient profiles for reproducible results—ideal for consistent mobile phases
- Low UV absorbance
- Flat baselines
- Low residue after evaporation
- Low water levels

### Key Applications

- HPLC
- UV
- Spectrophotometry
- Preparative Chromatography
- All General Liquid Chromatography Applications

### Key Markets Served

- Industrial
- Chemical
- Food & Beverage
- Academic/Institutes
- Pharmaceutical
- Government
- Analytical Testing
- Petrochemical
- Agriculture
- Biotechnology

## Acetone

2435

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC, corrected for water)	min. 99.8 %
Water (GC)	max. 0.2 %
Titration acid (meq/g)	max. 0.0005
Titration base (meq/g)	max. 0.0006
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
330 nm	max. 0.8
340 nm	max. 0.07
350 nm	max. 0.01
355 nm	max. 0.004
UV Cut-off	327 nm

## Acetonitrile

2856

ChromAR HPLC Super Gradient

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (CH <sub>3</sub> CN)	min. 99.9 %
Water (KF)	max. 0.02 %
Titration acid (meq/g)	max. 0.0005
Titration base (meq/g)	max. 0.0002
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
190 nm	max. 0.12
200 nm	max. 0.03
210 nm	max. 0.02
220 nm	max. 0.01

254-400 nm

max. 0.005

Gradient Elution Test

210 nm

max. 3 mAU

## Acetonitrile

6711

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay	min. 99.8 %
Water (KF)	max. 0.03 %
Titration acid (meq/g)	max. 0.0005
Titration base (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
190 nm	max. 0.52
200 nm	max. 0.05
210 nm	max. 0.03
220 nm	max. 0.02
230 nm	max. 0.01
240 nm	max. 0.005

## n-Butyl Alcohol

6724

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.03 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
230 nm	max. 0.2
240 nm	max. 0.1

250 nm	max. 0.05
260 nm	max. 0.02
310 nm	max. 0.004

## n-Butyl Acetate

6723

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99%
Residue after Evaporation	max. 0.0005%
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
260 nm	max. 0.3
280 nm	max. 0.1
300 nm	max. 0.05
320 nm	max. 0.02
360 nm	max. 0.004

## 1-Chlorobutane

6725

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8%
Residue after Evaporation	max. 0.0005%
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
230 nm	max. 0.2
240 nm	max. 0.05
250 nm	max. 0.01
260 nm	max. 0.005
270 nm	max. 0.005

## Cyclohexane

6720

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.4
220 nm	max. 0.1
230 nm	max. 0.05
240 nm	max. 0.01
350 nm	max. 0.004

## Chloroform

4443

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC, corrected for water)	min. 99.8 %
Water	max. 0.01 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
250 nm	max. 0.30
260 nm	max. 0.07
270 nm	max. 0.01
280 nm	max. 0.004
Fluorescence (as quinine):	
365 nm	max. 1 ppb
Stabilizer (Amylene)	

## 1,2-Dichloroethane

6726

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8%
Residue after Evaporation	max. 0.0005%
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
240 nm	max. 50%
250 nm	max. 85%
270 nm	max. 98%

## Dichloromethane

6714

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Water (KF)	max. 0.02 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
235 nm	max. 0.5
240 nm	max. 0.2
250 nm	max. 0.07
260 nm	max. 0.01
UV Cut-off	229 nm
Stabilizer (Amylene)	

## Diethyl Ether

6727

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5%
Residue after Evaporation	max. 0.0005%
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.02%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
230 nm	max. 0.3
250 nm	max. 0.1
260 nm	max. 0.05
280 nm	max. 0.02
300 nm	max. 0.004
Stabilizer (BHT)	

## Diethyl Ether

2854

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5%
Residue after Evaporation	max. 0.0005%
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
230 nm	max. 0.15
240 nm	max. 0.1
250 nm	max. 0.05
260 nm	max. 0.02
280 nm	max. 0.004
Ethanol (%)	~ 1 (volume percent)

## Diethylamine

6728

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5%
Residue after Evaporation	max. 0.005%
Water (KF)	max. 0.15%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
300 nm	max. 0.3
320 nm	max. 0.15
350 nm	max. 0.05
400 nm	max. 0.004

## N,N-Dimethylformamide

5362

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8%
Residue after Evaporation	max. 0.0005%
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
275 nm	max. 0.2
280 nm	max. 0.1
290 nm	max. 0.06
300 nm	max. 0.03
320 nm	max. 0.01

## Dimethyl Sulfoxide

2969

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5%
Residue after Evaporation	max. 0.001%
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05%

Ultraviolet Absorbance (1.00-cm cell vs. water):

270 nm	max. 0.4
280 nm	max. 0.2
300 nm	max. 0.1
320 nm	max. 0.05
330 nm	max. 0.02
350 nm	max. 0.01

## 1,4-Dioxane

6753

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.02 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
250 nm	max. 0.2
260 nm	max. 0.1
270 nm	max. 0.07
280 nm	max. 0.03
290 nm	max. 0.015



## Ethyl Acetate

H078

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Water (KF)	max. 0.05 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
260 nm	max. 0.15
270 nm	max. 0.05
280 nm	max. 0.02
300 nm	max. 0.004
UV Cut-off	252 nm

## n-Heptane, 99%

5410

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (by GC)	min. 99 %
Water (KF)	max. 0.01 %
Residue on Evaporation	max. 0.0005 %
Acidity (meq/g)	max. 0.0005
Ultraviolet Absorbance (1.00-cm cell vs water)	
210 nm	max. 0.6
220 nm	max. 0.2
230 nm	max. 0.05
240 nm	max. 0.02
250 nm	max. 0.006

## n-Heptane 99.5%

5139

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (CH <sub>3</sub> (CH <sub>2</sub> ) <sub>5</sub> CH <sub>3</sub> ) (GC, corrected for water)	min. 99.5 %
Water (KF)	max. 0.01 %
Acidity (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 1.00
220 nm	max. 0.1
230 nm	max. 0.02
240 nm	max. 0.01
250 nm	max. 0.005

## n-Heptane 95%

6750

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 95 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.3
220 nm	max. 0.1
230 nm	max. 0.02
240 nm	max. 0.01
250 nm	max. 0.005





## Heptane Fraction

3038

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 85 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.3
220 nm	max. 0.1
230 nm	max. 0.02
240 nm	max. 0.01
250 nm	max. 0.005

## Hexane Fraction

6751

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 45 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.2
220 nm	max. 0.1
230 nm	max. 0.02
240 nm	max. 0.01
250 nm	max. 0.004

## n-Hexane 95%

6752

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 95 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
200 nm	max. 0.5
210 nm	max. 0.2
220 nm	max. 0.05
230 nm	max. 0.02
240 nm	max. 0.01

## n-Hexane

6713

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (sum of 5 isomers, total hexanes, plus methylcyclopentane) (by GC, corrected for water)	min. 99 %
Assay (as n-hexane (by GC, corrected for water)	min. 95.0 %
Water (KF)	max. 0.01 %
Water-Soluble Titration Acid (meq/g)	max. 0.0005
Titration Base (meq/g)	max. 0.0003
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.15
220 nm	max. 0.05
230 nm	max. 0.02
240 nm	max. 0.009

## Hexane Fraction

6751

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 45 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.2
220 nm	max. 0.1
230 nm	max. 0.02
240 nm	max. 0.01
250 nm	max. 0.004

## Isopropyl Alcohol (2-Propanol)

3043

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Water (KF)	max. 0.05 %
Titration Acid (meq/g)	max. 0.0005
Titration Base (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.4
220 nm	max. 0.2
230 nm	max. 0.1
240 nm	max. 0.05
250 nm	max. 0.02
UV Cut-off	203 nm

## Methyl Alcohol, Anhydrous (Methanol)

3041

ChromAR HPLC Super Gradient

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.9 %
Water (KF)	max. 0.05 %
Titration Acid (meq/g)	max. 0.0005
Titration Base (meq/g)	max. 0.0002
Residue after evaporation	max. 0.0005 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
205 nm	max. 1.00
210 nm	max. 0.5
220 nm	max. 0.2
230 nm	max. 0.1

240 nm	max. 0.05
260 nm	max. 0.004
Gradient Elution test:	
235 nm	max. 2 mAU

## Methyl Alcohol, Anhydrous (Methanol) 6712

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Water (KF)	max. 0.05 %
Titration Acid (meq/g)	max. 0.0005
Titration Base (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Color (APHA)	max. 10
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.6
220 nm	max. 0.3
230 nm	max. 0.2
240 nm	max. 0.05
260 nm	max. 0.01

## Methyl Ethyl Ketone 6206

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
335 nm	max. 0.3
340 nm	max. 0.07
350 nm	max. 0.01
360 nm	max. 0.004

## Methyl tert-Butyl Ether 5398

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.8 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.02 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
220 nm	max. 0.4
240 nm	max. 0.2
250 nm	max. 0.1
260 nm	max. 0.05
270 nm	max. 0.02
280 nm	max. 0.01



## NMP (N-Methyl-2-pyrrolidinone)

6392

ChromAR HPLC

Suitable for Liquid Chromatography and UV-Spectrophotometry

Test	Specification
Assay (by GC)	min. 99.5 %
Residue after Ignition	max. 10 ppm
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
280 nm	max. 0.3
290 nm	max. 0.2
310 nm	max. 0.1
330 nm	max. 0.02
350 nm	max. 0.004

## n-Pentane 99%

6721

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.4
220 nm	max. 0.05
230 nm	max. 0.02

240 nm	max. 0.01
250 nm	max. 0.004

## n-Pentane 95%

6755

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 95 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.4
220 nm	max. 0.15
230 nm	max. 0.05
240 nm	max. 0.01
250 nm	max. 0.004

## Petroleum Ether, 40–60°C

6756

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.2
220 nm	max. 0.1
230 nm	max. 0.05
240 nm	max. 0.01
250 nm	max. 0.004

## Petroleum Ether, 60–80°C 6757

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.2
220 nm	max. 0.1
230 nm	max. 0.05
240 nm	max. 0.01
250 nm	max. 0.004

## n-Propyl Alcohol 5351

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
220 nm	max. 0.3
250 nm	max. 0.05
290 nm	max. 0.01
300 nm	max. 0.004

## Pyridine 6730

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5 %
Residue after Evaporation	max. 0.005%
Water (KF)	max. 0.05 %

Ultraviolet Absorbance (1.00-cm cell vs. water):	
340 nm	max. 0.07
350 nm	max. 0.02
400 nm	max. 0.01

## Tetrachloroethylene 6759

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.9 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
290 nm	max. 0.8
295 nm	max. 0.2
310 nm	max. 0.1
350 nm	max. 0.05
400 nm	max. 0.02

## Tetrahydrofuran

2858

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC, corrected for water)	min. 99.8 %
Water (KF)	max. 0.03 %
Acidity (meq/g)	max. 0.0005
Residue after evaporation	max. 0.0005 %
Peroxides (as H <sub>2</sub> O <sub>2</sub> )	max. 0.05 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
240 nm	max. 0.3
250 nm	max. 0.15
260 nm	max. 0.08
270 nm	max. 0.03
280 nm	max. 0.01
Fluorescence (as quinine):	
254 nm	max. 1 ppb
365 nm	max. 1 ppb
Stabilizer (None)	

## Toluene

4483

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC) (%)	min. 99.8 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
290 nm	max. 0.3

300 nm

max. 0.1

310 nm

max. 0.05

330 nm

max. 0.01

350 nm

max. 0.004

## 2,2,4-Trimethylpentane

6043

ChromAR HPLC

Suitable for HPLC, UV-Spectrophotometry and UV Applications

Test	Specification
Assay (GC)	min. 99.5 %
Residue after Evaporation	max. 0.0005 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.01 %
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.7
220 nm	max. 0.1
230 nm	max. 0.04
240 nm	max. 0.03
250 nm	max. 0.02

## Water

6795

ChromAR HPLC

Suitable for HPLC, UV - Spectrophotometry and UV Applications

Test	Specification
Residue after evaporation	max. 0.0005 %
Specific Conductance (250C, $\mu$ S/cm)	max. 2
Gradient Elution Test:	
254 nm	max. 0.002 AU
Ultraviolet Absorbance (1.00-cm cell vs. water):	
210 nm	max. 0.004
254 nm	max. 0.002

## AR™ Reagent Solvents

### Analytical grade solvents for general laboratory use

General use solvents are used in every laboratory and stockroom on a daily basis and require a combination of value and purity. Macron Fine Chemicals™ brand AR™ grade solvents from Avantor achieve this by delivering reliable and consistent results to laboratories the world over. These solvents meet or exceed general laboratory standards for analytical grade products, helping ensure the integrity of results in applications. Put your trust in a true global chemical manufacturer for your analytical solvents.

### AR Solvents Advantages:

- Quality that ensures consistent results
- Specifications that meet or exceed AR grade requirements
- Produced in ISO certified facilities to ensure reliability

### Key Markets Served

- Industrial
- Chemical
- Food & Beverage
- Academic/Institutes
- Pharmaceutical
- Government
- Analytical Testing
- Petrochemical
- Agriculture
- Biotechnology



## Acetone

6776

AR

Test	Specification
Assay	min. 99.5 %
Water (KF)	max. 0.3 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.001 %
Alcohols (CH <sub>3</sub> OH and C <sub>2</sub> H <sub>5</sub> OH)	max. 0.06 % (methanol)
Substances insoluble in water	passes test
Substances reducing KMnO <sub>4</sub> (as O)	max. 0.0002 %

## Acetonitrile

6786

AR

Test	Specification
Assay	min. 99.7 %
Water (KF)	max. 0.1 %
Titration acid (meq/g)	max. 0.0005
Titration base (meq/g)	max. 0.6
Residue after evaporation	max. 0.001 %
Propionitrile	max. 0.2 %

## 1-Butanol

5445

AR

Test	Specification
Assay (by GC)	min. 99.0 %
Water (KF)	max. 0.1 %
Residue on Evaporation	max. 0.001 %
Acidity (meq/g)	max. 0.0005
Aldehydes and ketones	max. 0.03 %

## Chlorobenzene

6788

AR

Test	Specification
Assay	min. 99.5 %
Water (KF)	max. 0.03 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.003 %

## Chloroform

4444

AR

Test	Specification
Assay	min. 99.5 %
Water (KF)	max. 0.05 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.001 %
Aldehydes and ketones (as C <sub>3</sub> H <sub>6</sub> O)	max. 0.005 %
Substances darkened by H <sub>2</sub> SO <sub>4</sub>	passes test
Free chlorine (Cl <sub>2</sub> )	max. 0.0005 %
Stabilizer (Ethanol)	

## Chloroform

5411

AR

Test	Specification
Assay (by GC)	min. 99.5 %
Water (KF)	max. 0.05 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %
Free Chlorine (Cl <sub>2</sub> )	max. 0.0005 %
Stabilizer (Amylene)	





## Cyclohexane

5412

AR

Test	Specification
Assay	min. 99 %
Water (KF)	max. 0.02 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %
Aromatic compounds	max. 0.05 %

## Cyclohexanone

6787

AR

Test	Specification
Assay	min. 99.5 %
Residue after Evaporation	max. 0.02 %
Titration Acid (meq/g)	max. 0.0005
Water (KF)	max. 0.1 %

## Dichloromethane

6779

AR

Test	Specification
Assay	min. 99.5 %
Water (KF)	max. 0.02 %
Titration acid (meq/g)	max. 0.0003
Residue after evaporation	max. 0.002 %
Free halogens	passes test
Stabilizer (Amylene)	

## Diethyl Ether

6783

AR

Test	Specification
Assay	min. 99.5 %
Water (KF)	max. 0.2 %
Titration acid (meq/g)	max. 0.0005

Residue after evaporation	max. 0.03 %
Ethanol	max. 0.1 %
Stabilizer (BHT)	

## N,N-Dimethylformamide

6785

AR

Test	Specification
Assay (GC)	min. 99.8 %
Water (KF)	max. 0.07 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.005 %

## 1,4-Dioxane

5413

AR

Test	Specification
Assay (by GC)	min. 99.8 %
Water (KF)	max. 0.05 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %

## Ethyl Acetate

6780

AR

Test	Specification
Assay	min. 99.5 %
Water (KF)	max. 0.05 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.001 %
Substances darkened by H <sub>2</sub> SO <sub>4</sub>	passes test

## Ethyl Alcohol Anhydrous 99.8% 6777

AR

Test	Specification
Assay	min. 99.8 %
Water (KF)	max. 0.2 %
Titration acid (meq/g)	max. 0.0002
Titration Base (meq/g)	max. 0.003
Residue after evaporation	max. 0.001 %
Aldehydes (as CH <sub>3</sub> CHO)	max. 0.001 %
Higher alcohols (as amyl alcohol)	max. 0.015 %
Methyl alcohol	max. 0.01 %
Time for reducing KMnO <sub>4</sub> solution	min. 10 min
Substances darkened by H <sub>2</sub> SO <sub>4</sub>	passes test
Carbonyl compounds (as CO)	max. 0.003 %

## Glycerol 6782

AR

Test	Specification
Assay	min. 99.5 %
Water (KF)	max. 0.5 %
Titration acid (meq/g)	max. 0.0002
Aldehydes and reducing substances	passes test
Esters (as glyceryl tributyrate)	max. 0.08 %
Sulfuric ash	max. 0.005 %
Sulfates (SO <sub>4</sub> )	max. 0.0005 %
Heavy metals (as Pb)	max. 0.0001 %

## n-Heptane 99% 5177

AR

Test	Specification
Assay (GC)	min. 99.0 %
Water (KF)	max. 0.02 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.001 %
Sulfur compounds	max. 0.001 %

## n-Heptane 95% 5443

AR

Test	Specification
Assay (by GC)	min. 95.0 %
Water	max. 0.02 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %
Sulfur Compounds	max. 0.001 %

## n-Hexane 99% 6729

AR

Test	Specification
Assay	min. 99.0 %
Water (KF)	max. 0.02 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.001 %
Sulfur Compounds	max. 0.001 %
Thiophene (C <sub>4</sub> H <sub>4</sub> S)	passes test



## n-Hexane 95%

5414

AR

Test	Specification
Assay (by GC)	min. 95.0 %
Water (KF)	max. 0.02 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %
Sulfur Compounds	max. 0.001 %

## Isopropyl Alcohol (2-Propanol)

6775

AR

Test	Specification
Assay	min. 99.7 %
Water (KF)	max. 0.1 %
Titration acid (meq/g)	max. 0.0005
Titration base (meq/g)	max. 0.0001
Residue after evaporation	max. 0.001 %
Substances insoluble in water	passes test
Aldehydes and ketones (as CO)	max. 0.005 %

Methyl Alcohol, Anhydrous  
(Methanol)

3004

AR

Test	Specification
Assay (GC)	min. 99.8 %
Water (KF)	max. 0.1 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.001 %

## Methyl Ethyl Ketone

5447

AR

Test	Specification
Assay (by GC)	min. 99.5 %
Water (KF)	max. 0.1 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %

## NMP (N-Methyl-2-pyrrolidinone)

5448

AR

Test	Specification
Assay (by GC)	min. 99.5 %
Water (KF)	max. 0.05 %
Acidity (meq/g)	max. 0.0005
Residue after Ignition	max. 10 ppm

## n-Pentane 99%

5501

AR

Test	Specification
Assay	min. 99.0 %
Water (KF)	max. 0.02 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %
Sulfur Compounds	max. 0.001 %



## n-Pentane 95%

5415

AR

Test	Specification
Assay (by GC)	min. 95 %
Water (KF)	max. 0.02 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %
Sulfur Compounds	max. 0.001 %

## Petroleum ether 60-80°C

5502

AR

Test	Specification
Water	max. 0.02 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %
Sulfur Compounds	max. 0.002 %

## Petroleum Ether, 40°–60°C

6722

AR

Test	Specification
Water (KF)	max. 0.02 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.001 %
Sulfur compounds	max. 0.002 %

## n-Propyl Alcohol

5503

AR

Test	Specification
Assay (by GC)	min. 99.5 %
Water (KF)	max. 0.1 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %

## Pyridine

6260

AR

Test	Specification
Assay (by GC)	min. 99.5 %
Water (KF)	max. 0.1 %
Residue on Evaporation	max. 0.005 %

## Tert-Butyl Methyl Ether

5449

AR

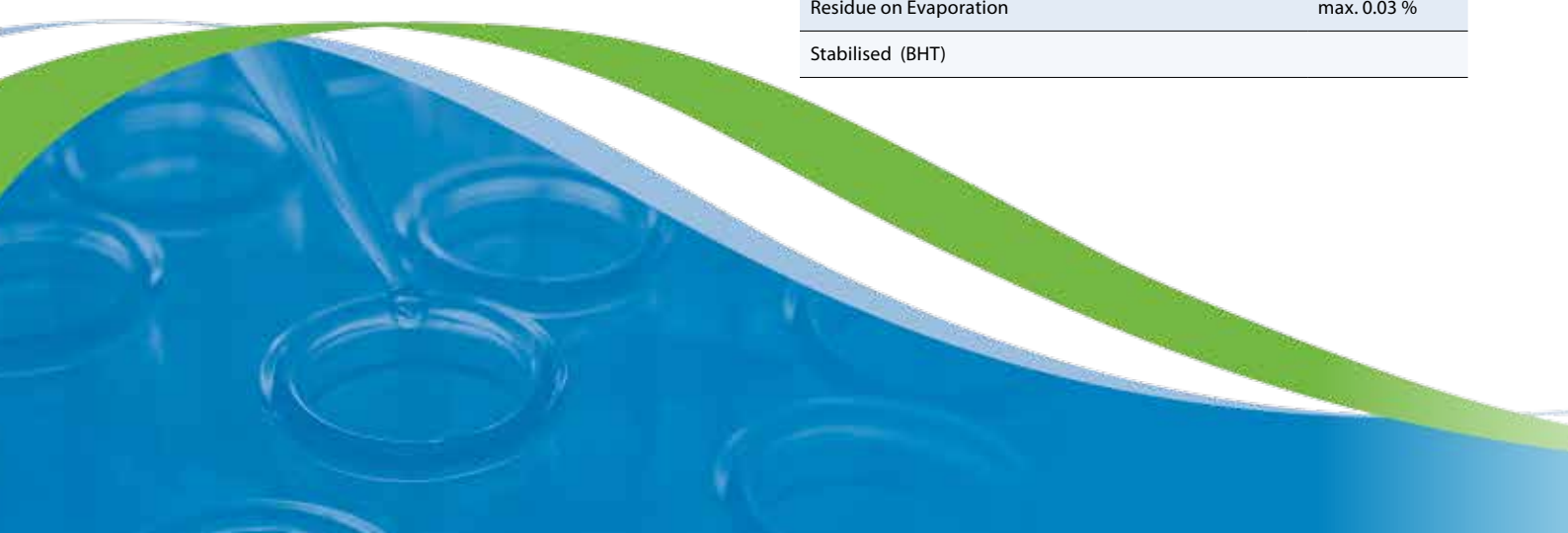
Test	Specification
Assay (by GC)	min. 99.5 %
Water (KF)	max. 0.05 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.001 %

## Tetrahydrofuran

3705

AR

Test	Specification
Assay (by GC)	min. 99.8 %
Water	max. 0.03 %
Acidity (meq/g)	max. 0.0005
Residue on Evaporation	max. 0.03 %
Stabilised (BHT)	



## Tetrahydrofuran

6778

AR

Test	Specification
Assay (GC)	min. 99.5 %
Titration acid (meq/g)	max. 0.0005
Water (KF)	max. 0.05 %
Residue after evaporation	max. 0.005 %
Peroxides (as H <sub>2</sub> O <sub>2</sub> )	max. 0.015 %
Stabilizer (None)	

## Toluene

6784

AR

Test	Specification
Assay (GC)	min. 99.5 %
Water (KF)	max. 0.03 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.002 %
Sulfur compounds	max. 0.0003 %

## 2,2,4-Trimethylpentane

5416

AR

Test	Specification
Assay (by GC)	min. 99.5 %
Water (KF)	max. 0.02 %
Residue on Evaporation	max. 0.001 %
Acidity (meq/g)	max. 0.0005
Sulfur Compounds	max. 0.001 %

## Xylenes

6781

AR

Test	Specification
Assay (GC)	min. 98.0 %
Water (KF)	max. 0.05 %
Titration acid (meq/g)	max. 0.0005
Residue after evaporation	max. 0.002 %
Substances darkened by H <sub>2</sub> SO <sub>4</sub>	passes test
Sulfur compounds	max. 0.001 %

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Macron Fine Chemicals™ brand AR™ grade acids are reagent grade acids that provide a unique combination of value and purity. AR grade acids meet or exceed general laboratory standards for analytical grade products, helping to ensure the integrity of results in applications and global constancy every time.

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- Chemical
- Food & Beverage
- Academic/Institutes
- Pharmaceutical
- Government
- Analytical Testing
- Petrochemical
- Agriculture
- Biotechnology

## Acetic Acid, Glacial

3125

AR

Test	Specification
Assay	min. 99.5 %
Acetaldehyde (CH <sub>3</sub> CHO)	max. 0.05 %
Residue after evaporation	max. 0.002 %
Substances reducing permanganate (as HCOOH)	max. 0.02 %
Chloride (Cl)	max. 0.001 %
Sulfate (SO <sub>4</sub> )	max. 0.001 %
Heavy metals (as Pb)	max. 0.0002 %

## Ammonium Hydroxide 25%

3126

AR

Test	Specification
Assay	min. 24 / max. 28 %
Residue after evaporation	max. 0.003 %
Substances reducing KMnO <sub>4</sub> (as O)	max. 0.0008
Chloride (Cl)	max. 0.0001 %
Phosphate (PO <sub>4</sub> )	max. 0.0002 %
Total Sulfur (as SO <sub>4</sub> )	max. 0.0003 %
Carbonate (CO <sub>3</sub> )	max. 0.002 %
Iron (Fe)	max. 0.0001 %
Heavy metals (as Pb)	max. 0.001 %



## Formic Acid 85%

3127

AR

Test	Specification
Appearance	colorless, clear liquid
Assay	min. 84 / max. 86 %
Acetic acid (CH <sub>3</sub> COOH)	max. 0.5 %
Oxalic acid (H <sub>2</sub> C <sub>2</sub> O <sub>4</sub> )	Passes test
Residue after evaporation	max. 0.003 %
Water precipitated substances	Passes test
Chloride (Cl)	max. 0.0005 %
Sulfate (SO <sub>4</sub> )	max. 0.003 %
Sulfite (SO <sub>3</sub> )	max. 0.0015 %
Heavy metals (as Pb)	max. 0.001 %
Iron (Fe)	max. 0.001 %

## Hydrochloric Acid 35–38%

3128

AR

Test	Specification
Appearance	Clear, colorless to yellow liquid
Assay	min. 35 / max. 38 %
Residue after ignition (as SO <sub>4</sub> )	max. 0.001 %
Sulfate (SO <sub>4</sub> )	max. 0.001 %
Free chlorine (Cl <sub>2</sub> )	max. 0.001 %
Iron (Fe)	max. 0.0001 %
Heavy metals (as Pb)	max. 0.0001 %

Hydrogen Peroxide, 30%  
Solution

3129

AR

Test	Specification
Appearance	Clear, colorless solution
Assay	min. 29 / max. 33 %
Free acids (as H <sub>2</sub> SO <sub>4</sub> )	max. 0.005 %
Residue after evaporation	max. 0.008 %
Chloride (Cl)	max. 0.0005 %
Sulfate (SO <sub>4</sub> )	max. 0.0006 %
Lead (Pb)	max. 0.0002 %

## Lactic Acid 88%

3130

AR

Test	Specification
Appearance	Colorless to light yellow, syrupy liquid
Assay	min. 88 / max. 92 %
Reducing sugars	Passes test
Residue after ignition (as SO <sub>4</sub> )	max. 0.04 %
Easily carbonized substances	Passes test
Chloride (Cl)	max. 0.002 %
Sulfate (SO <sub>4</sub> )	max. 0.005 %
Heavy metals (as Pb)	max. 0.0006 %
Arsenic (As)	max. 0.0001 %
Iron (Fe)	max. 0.0006 %
Stereochemical purity (L isomer assay)	min. 95 % (m/m)

## Nitric Acid 65%

3131

AR

Test	Specification
Appearance	Clear, colorless or yellowish liquid
Assay	min. 65 %
Residue after ignition	max. 0.005 %
Chloride (Cl)	max. 0.0003 %
Phosphate (PO <sub>4</sub> )	max. 0.001 %
Sulfate (SO <sub>4</sub> )	max. 0.001 %
Heavy metals (as Pb)	max. 0.0003 %
Arsenic (As)	max. 0.000003 %
Iron (Fe)	max. 0.0005 %
Lead (Pb)	max. 0.0001 %
Magnesium (Mg)	max. 0.0001 %
Manganese (Mn)	max. 0.00005 %

## Phosphoric Acid 85%

3132

AR

Test	Specification
Assay	min. 84.5 %
Reducing substances (as H <sub>3</sub> PO <sub>3</sub> )	max. 0.1 %
Nitrate (NO <sub>3</sub> )	max. 0.001 %
Chloride (Cl)	max. 0.001 %
Sulfate (SO <sub>4</sub> )	max. 0.01 %
Ca + Mg (as Ca)	max. 0.02 %
Arsenic (As)	max. 0.0002 %
Iron (Fe)	max. 0.005 %
Heavy metals (as Pb)	max. 0.002 %

## Sulfuric Acid 95%

3133

AR

Test	Specification
Appearance	Clear, colorless, oily liquid
Assay	min. 95 %
Residue after ignition	max. 0.001 %
Substances reducing KMnO <sub>4</sub> (as SO <sub>2</sub> )	max. 0.0003 %
Nitrate (NO <sub>3</sub> )	max. 0.0002 %
Chloride (Cl)	max. 0.0001 %
Ammonium salts (NH <sub>4</sub> )	max. 0.0003 %
Heavy metals (as Pb)	max. 0.0002 %

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Mexico City, Mexico 9001:2008  
Deventer, the Netherlands 9001:2008, 14001:2004 & 13485:2003

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