The following concentrations of foreign ions (in mg/l) do not interfere with the determination.

Ag^+	100	Fe^{2+}/Fe^{3+}	250	NO_2^-	10
Al^{3+}	1,000	H_2O_2	100	NO_3^-	1,000
Ca^{2+}	1,000	K^+	500	SO_3^{2-}	1,000
Cl^-	1,000	Mg^{2+}	1,000	Anionic surfactants	500
Cr^{3+}	250	Mn^{2+}	1,000	Cationic surfactants	100
CrO_4^{2-}	250	NH_4^+	1,000	Non-ionic surfactants	100
Cu^{2+}	250	Ni^{2+}	1,000		

The following concentrations of foreign ions (in mg/l) do not interfere with the determination.

Al^{3+}	1,000	$Fe^{2+/3+}$	1,000	NH_4^+	200
Ba^{2+}	1,000	Hg^+	200	NO_2^-	1,000
Ca^{2+}	1,000	Li^+	500	NO_3^-	1,000
Cl^-	1,000	Mg^{2+}	1,000	PO_4^{3-}	1,000
CN^-	1,000	MnO_4^-	1	S^{2-}	20
Cu^{2+}	1,000	Na^+	1,000	SO_4^{2-}	1,000

The following concentrations of foreign ions (in mg/l) do not interfere with the determination.

Formaldehyde	1,000	Glyoxal	1,000	Protein (BSA)	100
Glutaraldehyde	1,000	H_2O_2	1,000		

No interference is caused by protein concentrations below 1 g/l.

PO_4^{3-} PHOSPHATE — Ord. No. 1.10428.0001

Merckoquant® Phosphate Test

Presentation 100 test strips and reagent

Graduation 0 – 10 – 25 – 50 – 100 – 250 – 500 mg/l PO_4^{3-}

The Phosphate Test is suitable for determining ortho-phosphate in waste water, soil samples, fertilizers and suitably prepared food samples.
Phosphate detergents present in waste water are responsible for producing environmentally damaging algal bloom. Plants on the other hand need phosphorus in the form of phosphate particularly during growth and ripening. Regular monitoring of phosphate levels in soil is needed to prevent a deficit or surfeit of phosphate.
Phosphate occurs naturally in food. The body needs it for proper bone growth. At higher concentrations, however, phosphate can have a damaging effect.

K^+ POTASSIUM — Ord. No. 1.10042.0001

Merckoquant® Potassium Test

Presentation 100 test strips and reagent

Graduation 0 – 250 – 450 – 700 – 1000 – 1500 mg/l K^+

The test is suitable for determining the amount of potassium in drinking water, mineral water, process and waste waters, extracts of soil samples, wine, beer, fruit juice and other substances.

The test has the particular advantage that potassium can still be determined even when 10 times the amount of sodium is present.

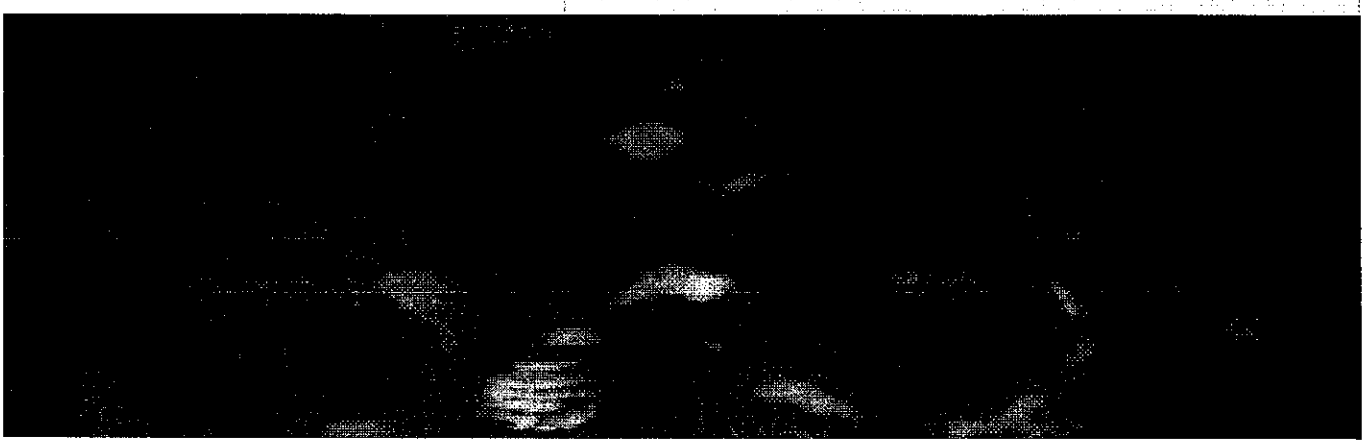
QUATERNARY AMMONIUM COMPOUNDS — Ord. No. 1.17920.0001

Merckoquant® Quaternary Ammonium Compounds

Presentation 100 test strips

0 – 10 – 25 – 50 – 100 – 250 – 500 mg/l (as benzalkonium chloride)

Quaternary ammonium compounds have microbicidal properties and are mainly used in surface cleaners. The test strips can be used to check and maintain the surface cleaner at the correct strength following dilution.



SO_4^{2-} SULFATE — Ord. No. 1.10019.0001

Merckoquant® Sulfate Test

Presentation 100 test strips

Graduation 0 – 200 – 400 – 800 – 1200 – 1600 mg/l SO_4^{2-}

The Sulfate Test is a rapid exploratory test. It can be used to give a rough estimation of the sulfate ion content of drinking and industrial water, as well as of effluent discharged, for instance; from electroplating works and leather goods manufacturers. In food testing, too, the test strips can be used to test for relevant food additives.

The following concentrations of foreign ions (in mg/l) do not interfere with the determination.

Al^{3+}	100	CrO_4^{2-}	400	S^{2-}	25
CN^-	50	Cu^{2+}	10	SO_3^{2-}	25
Cr^{3+}	100	$[Fe(CN)_6]^{3-/4-}$	400		

SO_3^{2-} SULFITE — Ord. No. 1.10013.0001

Merckoquant® Sulfite Test

Presentation 100 test strips

Graduation 0 – 10 – 40 – 80 – 180 – 400 mg/l SO_3^{2-}

The Sulfite Test has useful applications in food analysis, particularly in the testing of wine and fruit juices, sulfurated foods (e.g. fresh and dried fruit), fish, shellfish, crustaceans and minced meat products. Excessive concentrations of sulfite can provoke allergic reactions in sensitive persons.
Sulfite is sometimes used as reducing agent in process water. In this type of application, too, levels of sulfite can be monitored to prevent harmful discharges.

The following concentrations of foreign ions (in mg/l) do not interfere with the determination.

Ag^+	25	Cu^{2+}	10	NH_4^+	1,000
Al^{3+}	1,000	Fe^{2+}	1,000	Ni^{2+}	1,000
Ascorbate	100	Fe^{3+}	10	NO_2^-	1,000
Ba^{2+}	25	$[Fe(CN)_6]^{3-}$	50	NO_3^-	1,000
Ca^{2+}	1,000	$[Fe(CN)_6]^{4-}$	1,000	Pb^{2+}	25
Cd^{2+}	1,000	Mg^{2+}	1,000	PO_4^{3-}	1,000
Cl^-	1,000	Mn^{2+}	1,000	S^{2-}	50
CN^-	1,000	MnO_4^-	10	SO_4^{2-}	1,000
CrO_4^{2-}	10	Na^+	1,000	Zn^{2+}	1,000

Sn^{2+} TIN — Ord. No. 1.10028.0001

Merckoquant® Tin Test

Presentation 50 test strips and reagent

Graduation 0 – 10 – 25 – 50 – 100 – 200 mg/l Sn^{2+}

The Tin Test can be used to test for tin and tin compounds in electroplating baths, reducing agents, stabilizers, catalysts, disinfectants, fungicides and mordants used in the textile industry and, more especially, in liquid foods such as canned juices and preserves. Depending on the quality of the tin plating, the storage temperature and whether the can has been opened, significant quantities of tin may be absorbed by the product.

The following concentrations of foreign ions (in mg/l) do not interfere with the determination.

Ag^+	25	Cu^{2+}	25	NO_3^-	1,000
Al^{3+}	1,000	$Fe^{2+/3+}$	100	Pb^{2+}	25
Ca^{2+}	1,000	$Hg^{+/2+}$	25	PO_4^{3-}	1,000
Cd^{2+}	500	K^+	1,000	S^{2-}	500
Cl^-	1,000	Mg^{2+}	1,000	SO_3^{2-}	1,000
CN^-	1,000	Mn^{2+}	1,000	SO_4^{2-}	1,000
Co^{2+}	1,000	Na^+	1,000	$S_2O_3^{2-}$	1,000
Cr^{3+}	1,000	Ni^{2+}	500	Zn^{2+}	1,000
CrO_4^{2-}	500	NO_2^-	500	EDTA	1,000

TOTAL HARDNESS (SUM OF ALKALINE EARTH IONS) — Ord. No.

Merckoquant® Total hardness Test — 1.10025.0001
Presentation 100 test strips
Graduation 3 - 4 - 7 - 14 - 21 °d* ≙ 4 - 5 - 9 - 18 - 26 °e

Merckoquant® Total hardness Test — 1.10046.0001
Presentation 100 test strips
Graduation 5 - 10 - 15 - 20 - 25 °d* ≙ 6 - 12 - 19 - 25 - 30 °e

* The so-called "German degree" is frequently used as a practical measurement unit for hardness; this degree is defined as follows: 1 °d = 10 mg/l CaO ≙ 17.8 mg/l $CaCO_3$ ≙ 1.25 °e ≙ 1.78 °f

Knowing how hard the water is in a particular area enables detergents to be used more economically, thereby cutting down on pollution. The test can also be used to check the efficiency of domestic or industrial water softeners. Coffee machines used in the catering industry use ion exchangers to soften water, as do dishwashers. The test strips may be used to obtain fast results that are precise enough for performing in-process controls in industrial water treatment plants.

Water hardness is caused by the presence of alkaline earths, primarily calcium and magnesium. Total hardness is measured as the sum of all calcium and magnesium ions.

Individually sealed test strips are also available in bulk packs for special actions. Examples:

Content	Ord. No.:
5,000 test strips, individual (not sealed)	1.10029.0001
1,000 test strips, individual sealed	1.10032.0001
25,000 test strips, individual sealed	1.10032.0013

With 4 reaction zones: graduation 4 - 5 - 9 - 18 - 26 °e

25,000 test strips, individually sealed	1.10047.0013

With 5 reaction zones: graduation 6 - 12 - 19 - 25 - 30 °e

Zn^{2+} ZINC — Ord. No. 1.10038.0001

Merckoquant® Zinc Test
Presentation 100 test strips and reagent
Graduation 0 - 10 - 40 - 100 - 250 mg/l Zn^{2+} ≙ 4 - 5 - 9 - 18 - 26 °e

Zinc and zinc compounds are used in galvanizing plants, in zinc paints, as mordant in the textile industry, as preservatives, as additives in glass, enamel and ceramic ware and also, because of their antiseptic properties, in cosmetic preparations.
Zinc is a trace element which plays a vital role in human, animal and plant organisms. Small quantities of zinc are found in many types of meats and vegetables. Excessive concentrations of zinc, on the other hand, can have a damaging effect.

The following concentrations of foreign ions (in mg/l) do not interfere with the determination.

Ag^+	1,000	Cu^{2+}	5	NO_2^-	1,000
Al^{3+}	1,000	$Fe^{2+/3+}$	1,000	NO_3^-	1,000
Ca^{2+}	500	$Hg^{+/2+}$	5	Pb^{2+}	1,000
Cd^{2+}	1,000	Mg^{2+}	500	PO_4^{3-}	1,000
Cl^-	1,000	Mn^{2+}	100	S^{2-}	25
CN^-	200	MnO_4^-	25	SO_3^{2-}	1,000
Co^{2+}	1,000	NH_4^+	500	SO_4^{2-}	1,000
Cr^{3+}	100	Ni^{2+}	25		

REAGENT PAPERS — Ord. No.

In addition to its test strip ranges Merck sells an assortment of reagent papers in roll form. Packaged in this way, the papers are protected from external factors such as moisture, light, acidic and alkaline gases, etc. They give just a yes/no result, based on evaluation using one negative and two positive reference colors. No concentrations are listed.

The reagent papers have been used for a good number of years now and still feature in various monographs (e.g. in Reag. Ph Eur).

Lead acetate paper — 1.09511.0003
Presentation 3 rolls of 4.8 meter length
Lead acetate paper is used to check for sulfide and hydrogen sulfide.

Potassium iodide starch paper, Reag. Ph Eur — 1.09512.0003
Presentation 3 rolls of 4.8 meter length
Potassium iodide starch paper is used to check for oxidizing agents.

Potassium iodate starch paper, Reag. Ph Eur — 1.59225.0003
Presentation 3 rolls of 4.8 meter length
Potassium iodate starch paper is used to check for reducing agents.

Chlorine test paper — 1.17923.0001
Graduation 0 - 25 - 50 - 100 - 200 - 500 mg/l Cl_2
Presentation 3 rolls of 4 meter length
Chlorine test paper is used to check for free chlorine, and is ideal for supervising the use of chlorinated disinfectants.

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E-mail: environmental.analysis@merck.de
http://fea.merck.de

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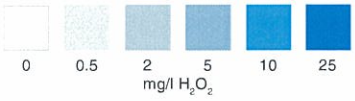
Merckoquant® 110011

Peroxide Test
Peroxid-Test

100 Tests / 25 Tests



For determination in organic solvents see package insert

Bestimung in organischen Lösungsmitteln s. Packungsbeilage

Charge/Lot Verw. bis/Exp.

Merck KGaA, 64271 Darmstadt, Germany

Store cold and dry • (2 - 8 °C) • Kalt und trocken lagern

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