

# Hach LCK Cuvette Test System

Hach® offers a perfectly coordinated system of photometers and reagents, required accessories and services. For all key parameters from Ammonium to Zirconium.



## Systematic quality and efficiency

Only a perfect interaction guarantees highest efficiency and accuracy – starting with the individual components of the spectrophotometer and the ready-to-use chemistry up to the interaction with you and your laboratory equipment. Hach delivers to you a perfectly coordinated system – as a developer, manufacturer and sales & service partner.

## Easy & safe handling

By means of bar-coded cuvettes, the DR spectrophotometer automatically identifies test parameter, range, method, lot number and expiry date. True calibration with each cuvette includes the calibration data for each individual batch, reducing variation in results. Colour coded cuvettes, packaging, pictograms, and instructions in multiple languages simplify testing. Dosiscap zip reagent delivery provides ease of use and eliminates hazardous chemistry handling.

## Sustainable & environmentally friendly

Continuous environmental investment is a high priority in the development of the LCK cuvette tests. Since 1978, we have collected used reagents for proper disposal. Thanks to the special reagent processing techniques applied in the Hach Environment Centre, more than 75% of all returned test components are fed back into the production and material cycles. Hach is certified according to ISO 14001!



Be Right™

# LCK Cuvette Tests

## LCK- Outstanding precision and handling



Our cuvette tests cover all water analysis applications. They satisfy the most demanding tasks, e.g. monitoring consent limits as an equivalent alternative to time-consuming reference methods. Each cuvette with Truecal includes the calibration data of the according batch. The 2D barcode also details the batch number and the expiry date of the reagents. The Certificate of Analysis (CoA) is directly available via RFID tag on the packaging.

Part number	Parameter	Measuring range	Method	According to standard	Quality control	Number of tests	Truecal	DR1900	DR3900	DR6000	GHS Hazard Code
LCK362	Acid capacity	0.5 - 8.0 mmol/L	Hach Method			25		■	■	■	-
LCK300	Alcohol	0.01 - 0.12 g/L	Alcohol Oxidase (Enzymatic)			24 (test includes zero solution)		■	■	■	-
LCK301	Aluminium	0.02 - 0.5 mg/L Al	Chromazurol S		LCA702	24 (test includes zero solution)		■	■	■	GHS02; GHS05; GHS07; GHS08
LCK302	Ammonium	47 - 130 mg/L NH <sub>4</sub> -N	Indophenol Blue	ISO 7150-1, DIN 38406 E5-1, UNI 11669:2017	LCA705	25		■	■	■	GHS05; GHS07; GHS09
LCK303	Ammonium	2 - 47 mg/L NH <sub>4</sub> -N	Indophenol Blue	ISO 7150-1, DIN 38406 E5-1, UNI 11669:2017	LCA703	25	Yes	■	■	■	GHS05; GHS07; GHS09
LCK304	Ammonium	0.015 - 2.0 mg/L NH <sub>4</sub> -N	Indophenol Blue	ISO 7150-1, DIN 38406 E5-1, UNI 11669:2017	LCA700	25	Yes	■	■	■	GHS05; GHS07; GHS09
LCK305	Ammonium	1 - 12 mg/L NH <sub>4</sub> -N	Indophenol Blue	ISO 7150-1, DIN 38406 E5-1, UNI 11669:2017	LCA704	25		■	■	■	GHS05; GHS07; GHS09
LCK502	Ammonium	100 - 1800 mg/L NH <sub>4</sub> -N	Indophenol blue	ISO 7150-1, DIN 38406 E5-1, UNI 11669:2017		25		■	■	■	GHS05; GHS07; GHS09
LCK411	Anammox Activity	0 - 1000 mAbs	Photometric heme detection			25		■	■	■	-
LCK390	AOX	0.05 - 3.0 mg/L AOX	Digestion + Iron(III)-Thiocyanate	DIN EN ISO 9562	LCA390	24		■	■	■	GHS02; GHS03; GHS05; GHS06; GHS07; GHS08
LCK391	AOX	0.005 - 0.50 mg/L AOX	Digestion + Iron(III)-Thiocyanate	DIN EN ISO 9562	LCA390	12		■	■	■	GHS02; GHS05; GHS06; GHS08
LCK241	Bitter units	≥ 2 Bitter units	Analogous MEBAK-Method	MEBAK II		25				■	GHS02; GHS05; GHS07; GHS08; GHS09
LCK554	BOD <sub>5</sub>	0.5 - 12 mg/L O <sub>2</sub>	Dilution Method	EN 1899-1		20		■	■	■	GHS05; GHS07
LCK555	BOD <sub>5</sub>	4 - 1650 mg/L O <sub>2</sub>	Dilution Method	EN 1899-1	LCA555	39		■	■	■	GHS05; GHS07

DR1900: Portable VIS Spectrophotometer, DR3900: Benchtop VIS Spectrophotometer, DR6000: Benchtop UV-VIS Spectrophotometer

Please note: Some methods require reagent blanks. For these, the number of tests varies.

-: product is not subject to classification

Hazard code descriptions: see page 6

# LCK Cuvette Tests

Part number	Parameter	Measuring range	Method	According to standard	Quality control	Number of tests	Truecal	DR1900	DR3900	DR6000	GHS Hazard Code
LCK307	Boron	0.05 - 2.50 mg/L B	Azomethine-H	DIN 38405-D17	191442	25 tests		■	■	■	GHS07
LCK308	Cadmium	0.02 - 0.3 mg/L Cd	Cadion		LCA702	25		■	■	■	GHS02; GHS05; GHS06; GHS07; GHS08; GHS09
LCK388	Carbonate/ carbon dioxide	55 - 550 mg/L CO <sub>2</sub>	pH Indicator			25		■	■	■	-
LCK311	Chloride Chloride	1 - 70 mg/L Cl 70 - 1000 mg/L Cl	Iron(III)-Thiocyanate		LCA700, LCA703, LCA704, LCA705	24		■	■	■	GHS02; GHS05; GHS06; GHS08
LCK410	Chlorine, free	0.05 - 2.0 mg/L Chlorine free/ ClO <sub>2</sub>	DPD	ISO 7393-1-2-1985, DIN 38408 G4-2	LCA310	24 (test includes zero solution)		■	■	■	GHS07
LCK310	Chlorine/Ozone/ Chlorine dioxide	0.05 - 2.0 mg/L Cl <sub>2</sub>	DPD	ISO 7393-1-2-1985, DIN 38408 G4-2	LCA310	24		■	■	■	GHS07
LCK213	Chromic acid	0.5 - 5.0 g/L CrO <sub>3</sub>	Intrinsic Baths Colour			25		■	■	■	GHS05
LCK313	Chromium	0.03 - 1.0 mg/L Cr VI	Diphenylcarbazide	EN ISO 11083, DIN 38405-D24	LCA702	25		■	■	■	GHS05; GHS07; GHS08
LCS313	Chromium, trace	0.005 - 0.25 mg/L Cr (VI)	Diphenylcarbazide	EN ISO 11885, DIN 38405-D24	LCA702	25		■	■	■	GHS05; GHS07; GHS08
LCK400	COD	0 - 1000 mg/L O <sub>2</sub>	Dichromate	ISO 15705	LCA720	24 tests, one blank		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK500	COD	0 - 150 mg/L O <sub>2</sub>	Dichromate	ISO 15705	LCA721	24 tests, one blank		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK014	COD	1000 - 10000 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA705	25		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK1014	COD (for samples up to 4000 mg/L Chloride)	100 - 2000 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA708	25		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK114	COD	150 - 1000 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA703	25	Yes	■	■	■	GHS05; GHS06; GHS08; GHS09
LCK314	COD	15 - 150 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA704	25	Yes	■	■	■	GHS05; GHS06; GHS08; GHS09
LCK1414	COD	5.0 - 60 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA700	25	Yes	■	■	■	GHS05; GHS06; GHS08; GHS09
LCK514	COD	100 - 2000 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA708	25	Yes	■	■	■	GHS05; GHS06; GHS08; GHS09
LCK614	COD	50 - 300 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA709	25		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK714	COD	100 - 600 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	1218629	25		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK914	COD	5 - 60 g/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44		25		■	■	■	GHS05; GHS06; GHS08; GHS09

# LCK Cuvette Tests

Part number	Parameter	Measuring range	Method	According to standard	Quality control	Number of tests	Truecal	DR1900	DR3900	DR6000	GHS Hazard Code
LCK1814	COD (for samples up to 20000 mg/L Chloride)	7 - 70 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44	LCA704	25		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK1914	COD (for samples up to 20000 mg/L Chloride)	70 - 700 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41-H44		25		■	■	■	GHS05; GHS06; GHS08; GHS09
LCK214	COD, mercury free	100 - 1000 mg/L O <sub>2</sub>	Dichromate	ISO 6060-1989, DIN 38409-H41	1218629	25		■	■	■	-
LCK394	CODMn	0.5 - 10 mg/L O <sub>2</sub>	Permanganate	ISO 8467	LCA394	25		■	■	■	-
LCK329	Copper	0.1 - 8.0 mg/L Cu	Bathocuproine Disulphonic Acid		LCA701	25		■	■	■	-
LCK529	Copper, trace	0.01 - 1.0 mg/L Cu	Bathocuproine Disulphonic Acid		LCA706	20			■	■	-
LCK229	Copper baths (acidic)	2 - 100 g/L Cu	Intrinsic Bath Colour			25		■	■	■	GHS05
LCK319	Cyanide, easily liberatable	0.03 - 0.35 mg/L CN	Hach Method			24 (test includes zero solution)		■	■	■	GHS02; GHS05; GHS07; GHS09
LCK315	Cyanide, free	0.01 - 0.6 mg/L CN	Babituric Acid-Pyridine			25		■	■	■	GHS05; GHS07; GHS08
LCK323	Fluoride	0.1 - 2.5 mg/L F	SPADNS		29153	25		■	■	■	GHS05
LCK325	Formaldehyde	0.5 - 10 mg/L H <sub>2</sub> CO	Acetylacetone			24 (test includes zero solution)		■	■	■	GHS07
LCK425	Formaldehyde	0.5 - 10 mg/L H <sub>2</sub> CO	Acetylacetone	ISO12460		25		■	■	■	-
LCS325	Formaldehyde, trace	0.01 - 1.0 mg/L H <sub>2</sub> CO	Acetylacetone			24 (test includes a zero solution)			■	■	GHS07
LCS425	Formaldehyde (trace)	0.05 - 3.0 mg/L H <sub>2</sub> CO	Acetylacetone	ISO12460		25			■	■	-
LCK320	Iron	0.2 - 6.0 mg/L Fe	1.10-Phenanthroline	DIN 38405-D17	2833649	24		■	■	■	GHS07
LCK321	Iron	0.2 - 6.0 mg/L Fe	1.10-Phenanthroline	ISO 6332-1988, DIN 38406 E1-1	LCA701	25		■	■	■	GHS09
LCK521	Iron, trace	0.01 - 1.0 mg/L Fe	1.10-Phenanthroline	ISO 6332-1988, DIN 38406 E1-1	LCA706	20			■	■	GHS09
LCK306	Lead	0.1 - 2.0 mg/L Pb	PAR		LCA701	25		■	■	■	GHS06; GHS07; GHS09
LCK326	Magnesium	0.5 - 50 mg/L Mg	Metalphthalein		1479442	25		■	■	■	-
LYW185	Menthol	0.5 - 15 mg/ 100 mL Menthol	p-Dimethylaminobenzaldehyde			25		■	■	■	GHS05
LCK330	Molybdenum	3 - 300 mg/L Mo	Thioglycolic Acid			24		■	■	■	GHS05; GHS06
LCK337	Nickel	0.1 - 6.0 mg/L Ni	Dimethylglyoxime	DIN 38406-E11	LCA701	25		■	■	■	GHS05; GHS07; GHS08
LCK537	Nickel (trace)	0.05 - 1.0 mg/L Ni	Dimethylglyoxime		LCA706	20			■	■	GHS05; GHS07; GHS08
LCK237	Nickel baths (acidic)	5 - 120 g/L Ni	Intrinsic Baths Colour			25		■	■	■	GHS05
LCK339	Nitrate	0.23 - 13.5 mg/L NO <sub>3</sub> -N	2.6-Dimethylphenol	ISO 7890-1-2-1986, DIN 38405 D9-2	LCA703	25	Yes	■	■	■	GHS02; GHS05; GHS07
LCK340	Nitrate	5 - 35 mg/L NO <sub>3</sub> -N	2.6-Dimethylphenol	ISO 7890-1-2-1986, DIN 38405 D9-2	LCA704	25	Yes	■	■	■	GHS02; GHS05
LCK341	Nitrite	0.015 - 0.6 mg/L NO <sub>2</sub> -N	Diazotisation	EN ISO 26777, DIN 38405 D10	LCA707	25	Yes	■	■	■	GHS07

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# LCK Cuvette Tests

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LCK342	Nitrite	0.6 - 6.0 mg/L NO <sub>2</sub> -N	Diazotisation	EN ISO 26777, DIN 38405 D10	LCA709	25	Yes	■	■	■	GHS07
LCK343	Nitrite	2 - 90 mg/L NO <sub>2</sub> -N	Diazotization	EN ISO 26777, DIN 38405 D10		25		■	■	■	GHS07
LCK541	Nitrite (trace)	0.0015 - 0.03 mg/L NO <sub>2</sub> -N	Diazotisation	EN ISO 26777, DIN 38405 D10	2340249	50			■	■	GHS07
LCK138	Nitrogen total (Laton)	1 - 16 mg/L TN <sub>b</sub>	Koroleff Digestion (Peroxodisulphate), and Photometric Detection with 2.6-Dimethylphenol	EN ISO 11905-1	LCA709	25	Yes	■	■	■	GHS02; GHS05; GHS07; GHS08
LCK238	Nitrogen total (Laton)	5 - 40 mg/L TN <sub>b</sub>	Koroleff Digestion (Peroxodisulphate), and Photometric Detection with 2.6-Dimethylphenol	EN ISO 11905-1	LCA700	25		■	■	■	GHS02; GHS05; GHS07; GHS08
LCK338	Nitrogen total (Laton)	20 - 100 mg/L TN <sub>b</sub>	Koroleff Digestion (Peroxodisulphate), and Photometric Detection with 2.6-Dimethylphenol	EN ISO 11905-1	LCA708	25		■	■	■	GHS02; GHS05; GHS07; GHS08
LCK365	Organic acids	50 - 2500 mg/L as Acetic acid	Esterification			25		■	■	■	GHS05; GHS07; GHS08; GHS09
LCK345	Phenols	0.05 - 5 mg/L Phenols	4-Nitroaniline			24 (test includes zero solution)		■	■	■	GHS05; GHS07; GHS09
LCK346	Phenols	5 - 150 mg/L Phenols	4-Aminoantipyrine	ISO 6439-1990, DIN 38409 H16		24 (test includes zero solution)		■	■	■	GHS03; GHS07; GHS08
LCK049	Phosphate, ortho	1.6 - 30 mg/L PO <sub>4</sub> -P	Vanadate-Molybdate		LCA703	25		■	■	■	GHS05
LCK549	Phosphate, ortho (trace)	0.01 - 0.5 mg/L PO <sub>4</sub> -P	Phosphormolybdenum Blue	ISO 6878-1-1986, DIN 38405 D11-4		20			■	■	GHS05; GHS07; GHS08
LCK348	Phosphate, ortho + total	0.5 - 5.0 mg/L PO <sub>4</sub> -P	Phosphormolybdenum Blue	ISO 6878-1-1986, DIN 38405 D11-4	LCA700, LCA707	25		■	■	■	GHS05; GHS07; GHS08
LCK349	Phosphate, ortho + total	0.05 - 1.5 mg/L PO <sub>4</sub> -P	Phosphormolybdenum Blue	ISO 6878-1-1986, DIN 38405 D11-4	LCA704, LCA709	25	Yes	■	■	■	GHS05; GHS07; GHS08
LCK350	Phosphate, ortho + total	2 - 20 mg/L PO <sub>4</sub> -P	Phosphormolybdenum Blue	ISO 6878-1-1986, DIN 38405 D11-4	LCA703, LCA708	25	Yes	■	■	■	GHS05; GHS07; GHS08
LCS349	Phosphate, ortho + total (trace)	0.01 - 0.5 mg/L PO <sub>4</sub> -P	Phosphormolybdenum Blue	ISO 6878-1-1986, DIN 38405 D11-4	LCA704, LCA709	25			■	■	GHS05; GHS07; GHS08
LCK240	Photometric iodine sample (PIS)	> 0.2	MEBAK Method	MEBAK II		25				■	GHS02; GHS05
LCK228	Potassium	5 - 50 mg/L K	Kalignost		LCA700	25		■	■	■	GHS05; GHS06; GHS07; GHS08
LCK328	Potassium	8 - 50 mg/L K	Kalignost		LCA700	24 (test includes zero solution)		■	■	■	GHS06
LCK354	Silver	0.04 - 0.8 mg/L Ag	Hach Method		1461342	25		■	■	■	GHS02; GHS07; GHS08
LCK355	Silver	5 - 400 mg/L Ag (l)	Hach Method		1461342	24		■	■	■	GHS05
LCK318	Sludge activity	5 - 200 µg Formazan (SA)	Colorimetric	DIN 38412-3				■	■	■	GHS02
LCK357	Starch	2 - 150 mg/L Starch	Hach Method			25		■	■	■	-
LCK153	Sulphate	40 - 150 mg/L SO <sub>4</sub>	Barium Sulphate		LCA704	25		■	■	■	GHS06

# LCK Cuvette Tests

Part number	Parameter	Measuring range	Method	According to standard	Quality control	Number of tests	Truecal	DR1900	DR3900	DR6000	GHS Hazard Code
LCK353	Sulphate	150 - 900 mg/L SO <sub>4</sub>	Barium Sulphate		LCA701, LCA702, LCA703	25		■	■	■	GHS06; GHS07
LCK653	Sulphide	0.1 - 2.0 mg/L S <sup>2-</sup>	Dimethyl-p-phenylenediamine	ISO 10530-1991, DIN 38405-D26		25		■	■	■	GHS05
LCK654	Sulphite	0.1 - 5.0 mg/L SO <sub>3</sub>	Hach Method			25		■	■	■	-
LCK332	Surfactants, anionic	0.05 - 2.0 mg/L	Methylene Blue (MBA)	ISO 7875-1-2-1984, DIN 38409-H 23-1		25		■	■	■	GHS06; GHS08
LCK432	Surfactants, anionic	0.1 - 4.0 mg/L	Methylene Blue (MBA)	ISO 7875-1-2-1984, DIN 38409-H 23-1		25		■	■	■	GHS06; GHS08
LCK331	Surfactants, cationic	0.2 - 2.0 mg/L	Bromophenol Blue			25		■	■	■	GHS02; GHS05; GHS06; GHS08
LCK333	Surfactants, nonionic	0.2 - 6.0 mg/L as Triton x 100	TBPE		LCA333	25		■	■	■	GHS02; GHS08
LCK334	Surfactants, nonionic	0.1 - 20 g/L	CTAS	DIN 38409-H23-2		25		■	■	■	GHS06; GHS08; GHS09
LCK433	Surfactants, nonionic	6 - 200 mg/L as Triton x 100	TBPE			25		■	■	■	GHS02; GHS08
LCK359	Tin	0.1 - 2.0 mg/L Sn	Pyridinfluoron (PYF)			24 (test includes zero solution)		■	■	■	GHS02; GHS03; GHS07; GHS08
LCK380	TOC	2 - 65 mg/L C	Difference Method (TOC is determined as the difference between the TC and TIC values), Persulphate Digestion	DIN 38409-H3	2833249	25		■	■	■	GHS03; GHS07; GHS08
LCK381	TOC	60 - 735 mg/L C	Difference Method (TOC is determined as the difference between the TC and TIC values), Persulphate Digestion	DIN 38409-H3	2833149	25		■	■	■	GHS03; GHS07; GHS08
LCK385	TOC	3 - 30 mg/L C	Purging Method, Persulphate Digestion	EN 1484, DIN 38409-H3	LCA704	25		■	■	■	GHS05; GHS08
LCK386	TOC	30 - 300 mg/L C	Purging Method, Persulphate Digestion	EN 1484, DIN 38409-H3	LCA703	25		■	■	■	GHS05; GHS08
LCK387	TOC	300 - 3000 mg/L C	Purging Method, Persulphate Digestion	EN 1484, DIN 38409-H3	LCA705	25		■	■	■	GHS05; GHS08
LCK242	Vicinal diketones (VDK)	0.015 - 0.5 mg/kg Diacetyl	Analogous MEBAK-Method	MEBAK II		25				1	GHS05; GHS06; GHS08; GHS09
LCK327	Water hardness	1 - 20 °dH	Metalphthalein		2833449	25		■	■	■	-
LCK427	Water hardness, residual	0.02 - 0.6 °dH	Metalphthalein		2833449	24 (test includes zero solution)		■	■	■	-
LCK360	Zinc	0.2 - 6.0 mg/L Zn	PAR		LCA701	24 (test includes zero solution)		■	■	■	GHS07
LCS360	Zinc, trace	0.02 - 0.8 mg/L Zn	PAR		LCA701	24 (test includes zero solution)		■	■	■	GHS07
LCK364	Zirconium	6 - 60 mg/L	SurTec/Hach Method			12 - 24 (dependent on number of reagent blanks)		■	■	■	GHS05

### GHS hazard codes



# Standard Solutions - Multi-parameter for Analytical Quality Assurance



The comprehensive Addista AQA system for Hach LCKcuvette tests contains a standard solution plus two round-robin solutions which allow the user to participate in analysis checking free of charge. Lot number, expiry date and target values by parameter are delivered via RFIDtag on the packaging.

Part number	For the following cuvette tests / parameters	Part number	For the following cuvette tests / parameters
LCA700	LCK304 Ammonium, 0.015-2.0 mg/L NH <sub>4</sub> -N LCK311 Chloride, 1-70 mg/L Cl LCK228 Potassium, 5-50 mg/L K LCK328 Potassium, 8-50 mg/L K LCK348 Phosphate (ortho), 0.5-5.0 mg/L PO <sub>4</sub> -P LCK1414 COD, 5-60 mg/L O <sub>2</sub> LCK238 Total Nitrogen, 5-40 mg/L TN <sub>b</sub>	LCA707	LCK341 Nitrite, 0.015-0.6 mg/L NO <sub>2</sub> -N LCK614 COD, 50-300 mg/L O <sub>2</sub> LCK348 Phosphate (total), 0.5-5.0 mg/L PO <sub>4</sub> -P
LCA701	LCK306 Lead, 0.1-2.0 mg/L Pb LCK321 Iron, 0.2-6.0 mg/L Fe LCK329 Copper, 0.1-8.0 mg/L Cu LCK337 Nickel, 0.1-6.0 mg/L Ni LCK353 Sulphate, 150-900 mg/L SO <sub>4</sub> LCK360 Zinc, 0.2-6.0 mg/L Zn	LCA708	LCK338 Total Nitrogen, 20-100 mg/L TN <sub>b</sub> LCK514 COD, 100-2000 mg/L O <sub>2</sub> LCK350 Phosphate (total), 2-20 mg/L PO <sub>4</sub> -P
LCA702	LCK301 Aluminium, 0.02-0.5 mg/L Al LCK308 Cadmium, 0.02-0.3 mg/L Cd LCK313 Chromium (VI), 0.03-1.0 mg/L Cr LCK313 Chromium (total), 0.03-1.0 mg/L Cr LCS313 Chromium trace, 0.005-0.25 mg/L Cr LCK353 Sulphate, 150-900 mg/L SO <sub>4</sub>	LCA709	LCK138 Total Nitrogen, 1-16 mg/L TN <sub>b</sub> LCK614 COD, 50-300 mg/L O <sub>2</sub> LCK349 Phosphate (total), 0.05-1.5 mg/L PO <sub>4</sub> -P LCK342 Nitrite, 0.6-6.0 mg/L NO <sub>2</sub> -N
LCA703	LCK049 Orthophosphate, 1.6-30 mg/L PO <sub>4</sub> -P LCK114 COD, 150-1000 mg/L O <sub>2</sub> LCI400 COD, 0-1000 mg/L O <sub>2</sub> LCK303 Ammonium, 2-47 mg/L NH <sub>4</sub> -N LCK311 Chloride, 1-70 mg/L Cl LCK339 Nitrate, 0.23-13.5 mg/L NO <sub>3</sub> -N LCK350 Phosphate (ortho), 2-20 mg/L PO <sub>4</sub> -P LCK353 Sulphate, 150-900 mg/L SO <sub>4</sub> LCK386 TOC, 30-300 mg/L C	LCA720 <sup>1)</sup>	LCI400 COD (ISO 15705), 0-1000 mg/L O <sub>2</sub> APC400 COD (ISO 15705), 0-1000 mg/L O <sub>2</sub> APC114 COD, 150-1000 mg/L O <sub>2</sub> APC303 Ammonium, 2-47 mg/L NH <sub>4</sub> -N APC338 Total Nitrogen, 20-100 mg/L TN <sub>b</sub> APC340 Nitrate, 5-35 mg/L NO <sub>3</sub> -N APC350 Phosphate, 2-20 mg/L PO <sub>4</sub> -P <b>Traceable to SRM from NIST.</b>
LCA704	LCK153 Sulphate, 40-150 mg/L SO <sub>4</sub> LCK305 Ammonium, 1-12 mg/L NH <sub>4</sub> -N LCK311 Chloride, 1-70 mg/L Cl LCK314 COD, 15-150 mg/L O <sub>2</sub> LCK340 Nitrate, 5-35 mg/L NO <sub>3</sub> -N LCK349 Phosphate (ortho), 0.05-1.5 mg/L PO <sub>4</sub> -P LCK385 TOC, 3-30 mg/L C	LCA721 <sup>1)</sup>	LCI500 COD (ISO 15705), 0-150 mg/L O <sub>2</sub> APC500 COD (ISO 15705), 0-150 mg/L O <sub>2</sub> APC314 COD, 15-150 mg/L O <sub>2</sub> APC304 Ammonium, 0.015-2.0 mg/L NH <sub>4</sub> -N APC138 Total Nitrogen, 1-16 mg/L TN <sub>b</sub> APC339 Nitrate, 0.23-13.5 mg/L NO <sub>3</sub> -N APC349 Phosphate, 0.05-1.5 mg/L PO <sub>4</sub> -P <b>Traceable to SRM from NIST.</b>
LCA705	LCK014 COD, 1000-10000 mg/L O <sub>2</sub> LCK302 Ammonium, 47-130 mg/L NH <sub>4</sub> -N LCK311 Chloride, 1-70 mg/L Cl LCK387 TOC, 300-3000 mg/L C	2833149 <sup>1)</sup>	Ammonia 15 mg/L NH <sub>3</sub> -N Nitrate 10 mg/L NO <sub>3</sub> -N COD 500 mg/L O <sub>2</sub> Phosphate 10 mg/L PO <sub>4</sub> Sulphate 400 mg/L SO <sub>4</sub> TOC 161 mg/L C
LCA706	LCK521 Iron trace, 0.01-1.0 mg/L Fe LCK529 Copper trace, 0.01-1.0 mg/L Cu LCK537 Nickel trace, 0.05-1.0 mg/L Ni LCW032 Manganese, 0.02-5.0 mg/L Mn	2833249 <sup>1)</sup>	Ammonia 2.0 mg/L NH <sub>3</sub> -N / 2.1 mg/L NH <sub>4</sub> -N Nitrate 4.0 mg/L NO <sub>3</sub> -N Phosphate 2.0 mg/L PO <sub>4</sub> COD 25 mg/L O <sub>2</sub> Sulphate 50 mg/L SO <sub>4</sub> TOC 8 mg/L C

<sup>1)</sup> Standard only, without round robin test solutions

# Analysis made simple

## LCKcuvette tests - unrivalled analysis

- ←fSafe- Maximum safety for users, thanks to the closed cuvette system and low amounts of reagents. Complete labelling of the individual cuvettes, including barcode label for automatic recognition in the photometer.
- ←fEasy- Convenient and error-free dosing of the reagents without pipetting and reagent contact, thanks to Dosisap and Dosisap zip: cuvette caps containing an exactly pre-dispensed amount of freeze-dried reagent.
- ←fApproved- Hach LCKcuvette tests are officially approved for legally required consent limits. With the help of standard solutions and round-robin test solutions, they provide the assurance you need.
- ←fVersatile- 50 parameters and more than 100 measuring ranges for all applications in water analysis- from extremely polluted industrial wastewater to trace analysis in drinking water.



### IBR+ increases reliability

During the rotating ten times measurement process using the IBR+ Integrated Barcode Reader, the DR spectrophotometer immediately picks up all the information on the cuvette, also including lot number and expiry date. Both are documented with the measurement value. In case of exceeding the expiry date you automatically get an alarm. TrueCal with each cuvette includes the calibration data for each individual batch, reducing variation in results. This allows you to meet reporting standards and to perform proficiency testing with higher confidence.



### RFID for traceability and rapid data updates

Never before has updating or programming of methods into the spectrophotometer been so easy and quick. You simply hold the cuvette test box in front of the DR's RFID module, wait for the acoustic signal and that's it. The measurement starts instantly - with the correct calibration data leading to the right result. In addition, Certificates of Analysis (CoA) can be retrieved immediately from the RFID tag on the packaging.



### Analytical Quality Assurance (AQA)

Quality assurance and analysis are completely interlinked. QA procedures can be easily defined and documented within the instrument without additional software. Results are only dependable in conjunction with AQA. Hach offers classic single standard solutions as well as practical multi-standard solutions in application-oriented combinations. In addition the comprehensive Addista AQA system for cuvette tests contains two round-robin solutions which entitle you to participate in external round-robin tests free of charge.



### Alignment of laboratory and process analysis

Compare your online value with your laboratory reference value directly in the spectrophotometer - via Link2sc connection between SC controller and DR3900/DR6000. The exchange of data works bidirectional, which means that you can do a matrix correction of your process probe straight from the laboratory.

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