

HACH LABORATORY QUICK GUIDE FOR FOOD APPLICATIONS

From process monitoring to quality control to wastewater, Hach® has the right tool for your challenging or routine applications. The comprehensive selection of Hach chemistries, spectrophotometers, electrochemistry meters and probes, and benchtop analysers provides the broadest range of analyses in the industry.

DR3900 Spectrophotometer and Chemistries

DR-Series Spectrophotometers and Hach chemistries are built on over 7 decades of water quality innovation to provide the most accurate and reliable results. Hach's integrated instrument-chemistry techniques are the industry standard.



Titralab AT1000

The Titralab Analyser is a one touch automatic titrator. Application packages cover a range of common food manufacturing parameters including pH, alkalinity, conductivity, and hardness. The AT1000 makes titration an easy and reliable analysis for any user.

HQ440D Meter

Hach HQD meters and versatile assortment of Intellical probes bring simplicity and consistency to electrochemical measurements. From pH, to DO, to ORP, to ISE – Hach electrochemical products deliver the highest quality results in an exceptionally sturdy package.



TL23 Turbidimeter

Turbidity measurement has never been easier. The TL23 Turbidimeter is the standard for demanding industrial turbidity applications. With tungsten or LED light sources and proven optics, no other instruments deliver more reliable, accurate, and stable measurements.

AS950 Automatic Sampler

The portable AS950 Automatic Sampler makes sampling easy and reliable. The rugged design ensures minimal maintenance and maximum uptime. The AS950 is configurable for almost any sampling scheme: fixed or portable, single or multi-bottle, composite or discrete.



Be Right™

Spectrophotometric Measurements

| Parameter | Platform | Product Number | Range* |
|------------------------|-----------------------------|--|--------------------------------------|
| Chemical Oxygen Demand | DR-Series Spectrophotometer | LCI400/LCI500/ LCK014/114/314/514/ 614/714/914/1014/1414 | 0 - 60,000 mg/L O ₂ |
| Nitrate | DR-Series Spectrophotometer | LCK339/340 | 0.23 - 35 mg/L NO ₃ -N |
| Phosphate | DR-Series Spectrophotometer | LCK348/349/350/049 | 0.05 - 30,0 mg/L PO ₄ -P |
| Ammonium | DR-Series Spectrophotometer | LCK302/303/304/305 | 0.015 - 130 mg/L NH ₄ -N |
| Total Nitrogen | DR-Series Spectrophotometer | LCK138/238/338 | 1 - 100 mg/L TN _t |
| Nitrite | DR-Series Spectrophotometer | LCK341/342 | 0.015 - 6,0 mg/L NO ₂ -N |
| Chloride | DR-Series Spectrophotometer | LCK311 | 1 - 1,000 mg/L Cl |
| Organic Acids | DR-Series Spectrophotometer | LCK365 | 50 - 2,500 mg/L CH ₃ COOH |
| Chlorine | DR-Series Spectrophotometer | LCK310/410 | 0.05 - 2.0 mg/L Cl ₂ |
| Iron | DR-Series Spectrophotometer | LCK320/321/521 | 0.01 - 6.0 mg/L Fe |
| Sulphate | DR-Series Spectrophotometer | LCK153/353 | 40 - 900 mg/L SO ₄ |
| Anionic Surfactants | DR-Series Spectrophotometer | LCK332/432 | 0.1 - 4.0 mg/L |
| Cationic Surfactants | DR-Series Spectrophotometer | LCK331 | 0.2 - 2.0 mg/L |
| Nonionic Surfactants | DR-Series Spectrophotometer | LCK333/334/433 | 0.2 - 2,000 mg/L TRITONx100 |
| Total Organic Carbon | DR-Series Spectrophotometer | LCK385/386/387 | 3 - 3,000 mg/L C |
| Hardness | DR-Series Spectrophotometer | LCK327/427 | 0.02 - 20 °dH |

*Ranges reflect multiple chemistries. See www.hach.com for details.

Electrochemical Measurements

| Parameter | Platform | Electrode | Range |
|--------------|------------------|-----------|---------------------------------------|
| pH | HQD-Series Meter | PHC201 | 0 - 14 pH |
| Conductivity | HQD-Series Meter | CDC401 | 0.01 - 20,000 µS/cm |
| BOD | HQD-Series Meter | LBOD101 | 0.1 - 20.00 mg/L O ₂ |
| DO | HQD-Series Meter | LDO101 | 0.1 - 20.00 mg/L O ₂ |
| ORP | HQD-Series Meter | MTC101 | ±1,200 mV |
| Ammonia | HQD-Series Meter | ISENH3181 | 0.01 - 14,000 mg/L NH ₃ -N |
| Sodium | HQD-Series Meter | ISENA381 | 0.023 - 23,000 mg/L Na |
| Chloride | HQD-Series Meter | ISECL181 | 0.1 - 35,500 mg/L Cl |

Analysers

| Parameter | Platform | Method | Range |
|-------------------------|-------------------|--------------------------|--|
| pH | AT1000 | Potentiometric | 0 - 14 pH |
| Alkalinity | AT1000 | Potentiometric Titration | 40 - 2,000 mg/L CaCO ₃ |
| Conductivity | AT1000 | Potentiometric | 0.01 - 200,000 µS/cm |
| Hardness (ISE) | AT1000 | Potentiometric Titration | 20 - 720 mg/L CaCO ₃ |
| Moisture (Karl Fischer) | AT1000 | Volumetric Titration | 0 - 100% H ₂ O |
| Chloride | AT1000 | Potentiometric Titration | 5 - 400 mg/L Cl |
| Acidity | AT1000 | Potentiometric Titration | 2 - 24.3 mg/L C ₆ H ₈ O ₇ |
| Chlorine (Total) | AT1000 | Amperometric Titration | 0.003 - 5 mg/L Cl ₂ |
| Salt Content | AT1000 | Potentiometric Titration | 0.1 - 5% NaCl |
| Turbidity | TL23 Nephelometer | Nephelometric | 0.01 - 10,000 NTU |
| Total Organic Carbon | QBD1200 Analyser | UV/Persulfate | 0.4 - 100 mg/L TOC |

Microbiological Measurements

| Parameter | Platform | Method | Range |
|------------------------|-------------|-----------------|---------------------------------------|
| Yeast and Mold | Paddle Test | DOC316.53.01223 | 10 ² - 10 ⁶ CFU |
| Total Aerobic Bacteria | Paddle Test | DOC316.53.01223 | 10 ² - 10 ⁷ CFU |

