

1 Instrument – 5 Technologies – 100+ Parameters

EZ Series Online Analysers for industrial
and environmental water analysis



Colorimetric Analyser



ISE Analyser



Titrator



Voltammetric Trace Metal Analyser



Chemiluminescence Analyser

The Hach® EZ Series covers a unique range of parameters on a single analyser platform. Five measurement technologies (colorimetry, titration, ion-selective electrode, voltammetry, and chemiluminescence) allow for a wide selection of measuring ranges and applications.

All instruments come in the same rugged mainframe with a compact footprint. Their common user interface on industrial panel PCs is easy to use and keeps training efforts low. Administrator access and activated/deactivated menu keys provide security. Various analog and digital communication outputs support easy integration into your systems. Discontinuous analysis at programmable intervals assures low reagent consumption and eliminates cross-contamination.

EZ Series analysers share wear and spare parts thus requesting less inventory. Similar maintenance steps again bring down training efforts. Optional Hach service agreements protect your investment and help ensure compliance.

The EZ Series Periodic Table of Elements

IA										IIA																																		
1 ^{pH} H 1.0079 Hydrogen																																												
3 Li 6.941 Lithium					4 Be 9.012 Beryllium																																							
11 ^{Sodium} Na 22.9898 Sodium					12 ^{Magnesium} Mg 24.305 Magnesium					IIIB					IVB					VB					VIB					VII B					←					VIII B				
19 ^{Potassium} K 39.102 Potassium					20 ^{Calcium} Ca 40.08 Calcium					21 Sc 44.956 Scandium					22 Ti 47.88 Titanium					23 V 50.942 Vanadium					24 ^{Total Chromium} Cr 51.996 Chromium					25 ^{Total Manganese} Mn 54.938 Manganese					26 ^{Total Iron} Fe 55.847 Iron					27 Co 58.933 Cobalt				
37 Rb 85.4678 Rubidium					38 Sr 87.6 Strontium					39 Y 88.906 Yttrium					40 Zr 91.22 Zirconium					41 Nb 92.906 Niobium					42 ^{Molybdenum} Mo 95.94 Molybdenum					43 Tc (98) Technetium					44 Ru 101.07 Ruthenium					45 Rh 102.906 Rhodium				
55 Cs 132.9054 Caesium					56 Ba 137.33 Barium					57 La 138.906 Lanthanum					72 Hf 178.49 Hafnium					73 Ta 180.948 Tantalum					74 W 183.85 Tungsten					75 Re 186.207 Rhenium					76 Os 190.2 Osmium					77 Ir 192.22 Iridium				
87 Fr (223) Francium					88 Ra 226.025 Radium					89 Ac 227.028 Actinium																																		

Element name

Relative atomic mass

Additional parameters

Microbial Load / ATP	Cyanide Total Cyanide	Volatile Fatty Acids (VFA) FOS/TAC	Chlorine, free Chlorine, total	Hydrogen Per
Toxicity	Thiocyanate SCN⁻	Urea	Formaldehyde	Glucose
Potassium hydroxide	Sodium hydroxide Sodium bisulfite	Sulphur dioxide	TMAH (Tetramethyl-ammonium hydroxide)	Color Color Aurubis
Available on www.hach.com	Available on request			

VIIIA

2
He
4.003
Helium

10
Ne
20.179
Neon

18
Ar
39.948
Argon

36
Kr
83.80
Krypton

54
Xe
131.29
Xenon

86
Rn
(222)
Radon

VIIA

9 Fluoride
F
18.998
Fluorine

17 Chloride
Cl
35.453
Chlorine

35
Br
79.904
Bromine

53 Iodine
I
126.905
Iodine

85
At
(210)
Astatine

VIA

8
O
15.999
Oxygen

16 Sulfate Sulfide
S
32.06
Sulphur

34 Total Selenium
Se
78.96
Selenium

52
Te
127.60
Tellurium

84
Po
(209)
Polonium

VA

7 Total N TKN
N
14.007
Ammonium Nitrate Nitrite Nitrogen

15 Total P Phosphate
P
30.974
Phosphorus

33 Total Arsenic As(III) As(III+V)
As
74.922
Arsenic

51 Total Antimony Sb(III+V)
Sb
121.75
Antimony

83
Bi
208.980
Bismuth

IVA

6 COD TOC, TC Phenol
C
12.011
Carbon

14 Silica
Si
28.086
Silicon

32
Ge
72.59
Germanium

50 Total Tin Sn(II)
Sn
118.69
Tin

82 Total Lead Pb(II)
Pb
207.2
Lead

IIIA

5 Boron
B
10.811
Boron

13 Total Aluminium Al(III)
Al
26.982
Aluminium

31
Ga
69.72
Gallium

49
In
114.82
Indium

81
Tl
204.383
Thallium

IB

IIB

28 Total Nickel Ni(II)
Ni
58.71
Nickel

29 Total Copper Cu(II)
Cu
63.546
Copper

30 Total Zinc Zn(II)
Zn
65.38
Zinc

46
Pd
106.42
Palladium

47 Total Silver Ag(I)
Ag
107.868
Silver

48 Total Cadmium Cd(II)
Cd
112.41
Cadmium

78
Pt
195.08
Platinum

79
Au
196.967
Gold

80 Total Mercury Hg(II)
Hg
200.59
Mercury

Atomic symbol

Atomic number

EZ Series Parameter

oxide H₂O₂

Hydrazine N₂H₄

DEHA
(Diethylhydroxylamine)

Anionic charge
Kationic charge
Charge density

Thorium

Acidity, free
Acidity, total

Hydrofluoric Acid

Acetic Acid
Lactic Acid
Oxalic Acid

Hydrochloric Acid
Phosphoric Acid
Sulfuric Acid



Be Right™

Complete solutions for the complete water cycle

Risk mitigation, compliance, safety and instrument uptime: these are common requirements in water management, independent of the application. The EZ Series Analysers provide a solution for continuously monitoring parameters that are critical to these concerns.

Application examples

- Monitoring of microbial ATP as the common denominator in bacterial and pathogen contamination, e.g. for prevention of biofouling in RO membranes
- Controlling of primary disinfection and disinfection by-products (DBPs)
- Detection of trace metals in source water, the distribution network or in your wastewater effluent post chemical precipitation and clarification
- Cost-effective determination of organic carbon in surface water intake
- Monitoring of corrosion, scaling and fouling indicators in your feed water
- Controlling of process efficiency and critical process parameters in anaerobic digestion
- Detection of acute and chronic toxicity in wastewater streams to protect your vulnerable microorganisms

EZ Series Overview

Thanks to the versatile instrument platform in many cases it will be possible to match the online analysis to the method you are using in your laboratory.

- EZ1000 Series: colorimetric analysers
- EZ2000 Series: colorimetric analysers with digestion
- EZ3000 Series: ion-selective analysers
- EZ3500 Series: ion-selective analysers with standard addition for complex matrices
- EZ4000 Series: single parameter titrators
- EZ5000 Series: multi parameter titrators
- EZ6000 Series: voltammetric trace metal analysers
- EZ7000 Series: dedicated analysers, e.g. for COD, TOC or Total Nitrogen + Total Phosphorus

Sample Preconditioning

EZ Series Analysers can be combined with sample preconditioning units for external dilution or filtration to meet the requirements of the individual application. All systems are designed for fully automatic operation and require virtually no human intervention.

The self-cleaning EZ9000 Series filtration systems are either equipped with a blow-back action by instrument air or a specific cleaning cycle to prevent the filter element, the sample tubing and the analyzer from blocking and blinding. This design principle allows for trouble-free sampling and contributes to high up-times.

Service Partnership

Hach provides on-site and in-factory repair, preventative maintenance, and calibration programs for your instruments to ensure reliability and instrument up-time. We have services to fit your specific needs.