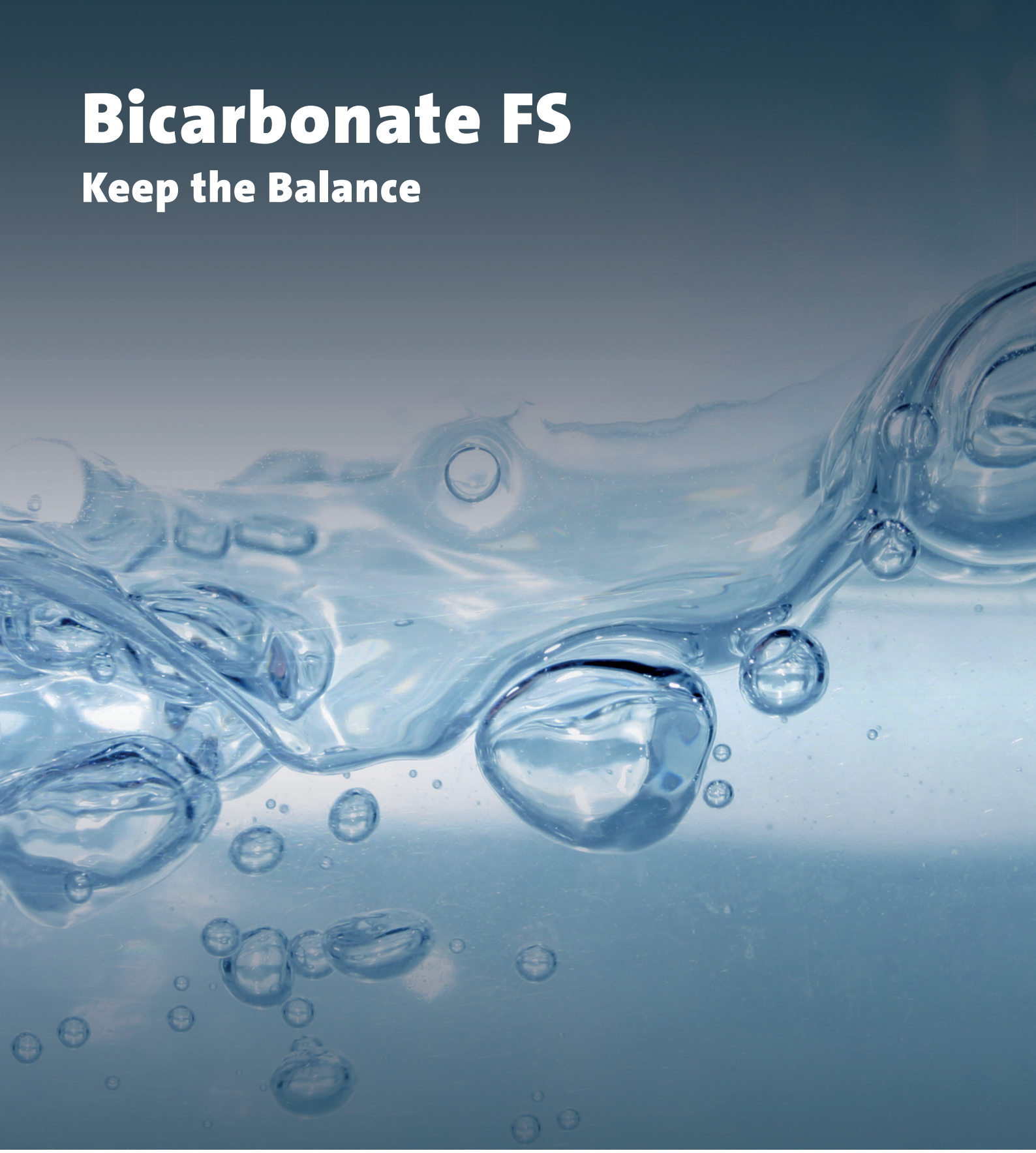
Bicarbonate FS

Keep the Balance



- Fluid-Stable, Ready-to-Use Monoreagent
- Superior On-Board and Calibration Stability
- Excellent Performance

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Clinical Relevance

Bicarbonate, also termed hydrogencarbonate, is a salt derived from carbonic acid. Since the anions of this salt (HCO_3^- / CO_3^{2-}) can act as a proton donor or acceptor, they fulfill the essential physiological function as a buffer system to ensure the maintenance of the acid-base balance in blood. Deviating values indicate disorders associated with disturbances of metabolic and respiratory systems like acidosis or alkalosis.

Reaction Principle

Phosphoenolpyruvate + HCO_3^- → **Phosphoenolpyruvate Carboxylase + Mg^{2+}** → **Oxaloacetate + $H_2PO_4^-$**

Oxaloacetate + NADH analog red. → **Malate Dehydrogenase** → **Malate + NADH analog**

The decrease in absorbance measured at 405/415 nm is directly proportional to the bicarbonate concentration in the sample.

Intra-assay precision n = 20	Mean (mmol/L)	SD (mmol/L)	CV (%)
Sample 1	17.6	0.14	0.80
Sample 2	19.9	0.16	0.80
Sample 3	30.1	0.28	0.93

Inter-assay precision n = 20	Mean (mmol/L)	SD (mmol/L)	CV (%)
Sample 1	16.8	0.53	3.16
Sample 2	20.3	0.49	2.40
Sample 3	30.0	0.68	2.26

Excellent Performance

- Synthetic NADH analog ensures excellent stability
- 3 weeks on-board and calibration stability
- No interferences by ascorbate up to 30 mg/dL, bilirubin up to 50 mg/dL, hemoglobin up to 500 mg/dL and lipemia up to 1400 mg/dL triglycerides
- Wide measuring range 4 – 50 mmol/L
- Easy applicable to various clinical chemistry analyzers
- Fluid-stable, ready-to-use monoreagent
- Very good comparison versus competitor test

Climate-neutral print
(Carbon neutral)
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