

## Survey for Blood Gas and Electrolytes (BG12, BG4)

EQAA Provider:

ESfEQA GmbH  
Heidelberg

Survey Coordinator:

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### Instructions for Use

#### Notes:

The controls for the program Blood Gas and Electrolytes are buffered aqueous solutions and have been equilibrated with specific levels of CO<sub>2</sub> and O<sub>2</sub>. The controls do not contain human or biological materials.

Various tasks of the proficiency testing scheme may occasionally be given over to qualified subcontractors. However, ESfEQA is responsible to the participants for the subcontractor's work.

Results from sample analysis may only be disclosed to colleagues from other laboratories after the testing period has been concluded.

By registering for and participating in this EQA participants agree to accept the general terms and conditions of ESfEQA GmbH. These can be retrieved online at [www.esfeda.eu](http://www.esfeda.eu).

### 1. Intended Use

The samples are intended for use as quantitative control material for External Quality Assessment (EQA) in medical laboratories for the following analytes:

Bicarbonate (HCO<sub>3</sub><sup>-</sup>), Calcium, Chloride, Creatinine, Glucose, Lactate, Magnesium, pCO<sub>2</sub>, pH, pO<sub>2</sub>, Potassium, Sodium, Urea

### 2. Product Description

The samples are liquid and ready to use.

### 3. Storage and Stability

The samples should be stored at 2-8°C. They are stable at least until the deadline for data submission as indicated below.

The samples should be analyzed immediately after opening. Calcium, Chloride, Glucose, Lactate, Potassium, Sodium and Urea are stable for up to one hour after opening.

### 4. Sample Preparation and Analysis

Prior to testing allow the ampoules to equilibrate to 20-25°C for at least four hours.

Directly before use invert the ampoule several times to mix the solution. Tap the ampoule to restore the liquid at the bottom.

**Opening of regular ampoules:** Use gauze, tissue, gloves, or an appropriate ampoule opener to protect fingers from cuts and open the ampoule by snapping off the tip at the score.

**Opening of one-point cut ampoules having a red colored dot:** Hold the bottom of the ampoule with thumb pointing to the red colored dot. Scoring located below the red dot is the breaking point of the ampoule. Grasp the top of the ampoule with other hand, positioning thumb at the red dot. Press back to break at the scoring under the red dot.

Immediately introduce the liquid from the ampoule to the analyzer, following the instruction of the instrument manufacturer for sampling control material. Use direct aspiration, syringe transfer, or capillary mode techniques.

### 5. Dates and Submission of Test Results

Testing Periods: Please refer to the sample labels. Results can be submitted anytime within the testing period indicated on the sample labels.

Please submit your results electronically to ESfEQA at <https://teqa.esfeda.eu>.

Contact your local distributor of ESfEQA programs or ESfEQA directly if you need assistance with registration in TEQA. Alternatively, though not preferred, use the result form provided on the ESfEQA website. In both cases indicate the instrument and method used for the analysis of the samples.

Quantitative results are generally reported with a value and a unit. The participant determines the number of digits for reporting. Results specified as e.g. '< below measuring range' or '< 0.02' are not valid. If the analyzer system displays such results, they shall be interpreted as following: For results within the measuring range and below the Limit of Quantification (LoQ) the obtained value should be reported. For results below the Limit of Detection (LoD), this limit should be reported. For samples that have analyte concentrations above the test range, the sample can be diluted (if recommended for particular applications) or the upper test range limit can be reported as result.

### 6. Deadline for Data Submission

The deadlines for submitting results are indicated on the sample labels (time zone GMT +1).

### 7. Reports and Certificates

The data will be evaluated by ESfEQA. The individual laboratory reports and certificates can be retrieved online at <https://teqa.esfeda.eu>.