

## Chromium (VI)-Rapid test PSIMA®-Cr<sup>6+</sup>



### METHOD AND SCOPE

Photometric determination of hexavalent chromium in neutral and alkaline inorganic liquids without dilution steps.

Typical applications are waste water from metal processing, surface treatment of metals and painting and cleaning processes.

Examples for the application of the rapid test are:

- Control of the detoxification process of waste water containing chromium (VI) from stainless steel production
- Monitoring the discharge of treated process wastewater into receiving waters

The exact result of the rapid test is already available after approx. 1 minute. Based on a visual determination, it is possible to check within 30 seconds whether a discharge limit value of e.g. 0,1 mg/l Cr<sup>6+</sup> is complied with.

### MEASURING RANGE AND INFLUENCE OF FOREIGN SUBSTANCES

The measuring range of the rapid test PSIMA®-Cr<sup>6+</sup> is between 0,02 und 0,2 mg/l Cr<sup>6+</sup>

Matrix components such as F<sup>-</sup>, SO<sub>4</sub><sup>2-</sup>, Fe<sup>2+</sup>, Cr<sup>3+</sup>, Ni<sup>2+</sup> and other metals do not interfere with the determination in smaller concentrations. Traces of organic components and solids also have no influence on the measurement.

It is nevertheless recommended to test the suitability of the rapid test before use. Adaptation of the methodology to the application is possible.

## REAGENTS AND AUXILIARIES

Observe the hazardous substance labelling on the individual components of the pack.

When stored closed at +15 to +25 °C, the test reagents can be used up to the date stated on the package.

Package contents:

- reaction syringes with sealing plugs
- syringe filters 0,45 µm
- disposable cuvettes

## IMPLEMENTATION

- photometric determination
- fill empty cuvette with deionised water and activate the zero adjustment on photometer
- remove sealing plug from reaction syringe
- fill reaction syringe with approx. 4-5 ml sample liquid
- draw in some air
- place the syringe filter on the reaction syringe and shake for approx. 30 seconds
- fill the empty cuvette to approx.  $\frac{3}{4}$  of its capacity
- place the filled cuvette with the transparent side in the beam path of the photometer

## ANALYTICAL QUALITY ASSURANCE

For quality assurance, a zero adjustment of the photometer with deionised water should be carried out after approx. 25 measurements and a standard solution should be measured.

## NOTES

Wear closed work clothes as well as protective gloves and goggles when performing the rapid test.