



# COSA<sup>®</sup> CIP 77

## Description

Liquid, acid detergent based on inorganic acid in the pharmaceutical and cosmetic industry

## Characteristics

- especially suitable for the removal of iron-oxide-red pigments
- suitable for CIP-systems
- surfactant-free
- validate-, measure- and controllable with conductivity

## Subject to incoming goods control

<b>Appearance:</b>	<b>clear, yellow-brown liquid</b>
<b>Density:</b>	<b>1.53 - 1.57 g/cm<sup>3</sup> (at 20°C)</b>
<b>Titration:</b>	
Use solution:	50 ml (1 % solution)
Titrant:	1.0 mol/l Sodiumhydroxide (NaOH)
Endpoint:	pH-value = 8.3
<b>Consumption:</b>	<b>7.0 – 7.4 ml</b>
% Acidity (expressed as Phosphoric Acid):	
% Acidity as H <sub>3</sub> PO <sub>4</sub> =	
	$\frac{(\text{ml NaOH to pH 8.3}) \cdot (1 \text{ mol/l}) \cdot (49) \cdot (100)}{\text{Sample weight [g]} (1000)}$
<b>% Acidity (expressed as H<sub>3</sub>PO<sub>4</sub>) =</b>	<b>68.60 - 72.52 %</b>

## ***Properties***

<b>Concentrate</b>	<b>Storage stability:</b>	0 - 40 °C
	<b>Solubility:</b>	at 20 °C miscible with water in any proportion
	<b>P content:</b>	24.4 %
	<b>N content:</b>	0.00 %
	<b>COD:</b>	15 - 20 mg O <sub>2</sub> /g
	<b>Flash point:</b>	not applicable
<b>Application solution</b>	<b>pH:</b>	1.5 - 1.9 (1 %, 20 °C, deionized water )
	<b>Conductivity:</b>	8.1 mS/cm (1 %, 20 °C, deionized water)

<b>Material compatibility:</b>	<b>COSA CIP 77</b> is, under the application described below, compatible with
<ul style="list-style-type: none"><li>• <b>Metals</b></li></ul>	austenitic CrNi steels (quality at least DIN 1.4301 = AISI 304)
<ul style="list-style-type: none"><li>• <b>Plastics</b></li></ul>	PE, PP, PTFE, PVDF  The suitability of higher concentrations and/or other plastics should be tested in case need.

## ***Application***

**COSA CIP 77** is suitable for the removal of iron-oxide-red pigments in homogenizers, tanks, pipelines as well as fermenters and similar equipment in the pharmaceutical and cosmetic industry.

### **Mode of application**

#### **Standard CIP processes**

After the alkaline cleaning and intermediate rinse a 0.5 - 2 % **COSA CIP 77** solution is used at 60 - 80°C for 20 - 30 minutes.

#### **Specific procedure to remove iron oxide red pigments**

Concentration:	5 - 10 % <b>COSA CIP 77</b>
Temperature:	60 - 85 °C
Contact time:	20 - 30 minutes

#### **General cleaning**

Concentration:	1 - 3 % <b>COSA CIP 77</b>
Temperature:	5 - 85 °C
Contact time:	depending on the degree of soiling

Concentration, temperature and cleaning time can be optimized by evaluation of respective cleaning trials.

Final rinse with water of minimum drinking water quality, ensuring all soil and product residues are removed.

## ***Monitoring***

### **Concentration determination**

#### **Titration**

Receiving flask:	50 ml application solution
Titration solution:	1 n sodium hydroxide solution (NaOH)
Indicator:	Phenolphthalein
Titration factor:	0.14

Volume added in ml x 0.14 = % **COSA CIP 77**

#### **Concentration control**

The dosage of **COSA<sup>®</sup> CIP 77** can be carried out conductivity-controlled, volume proportional to the water flow cyclic and time proportional.

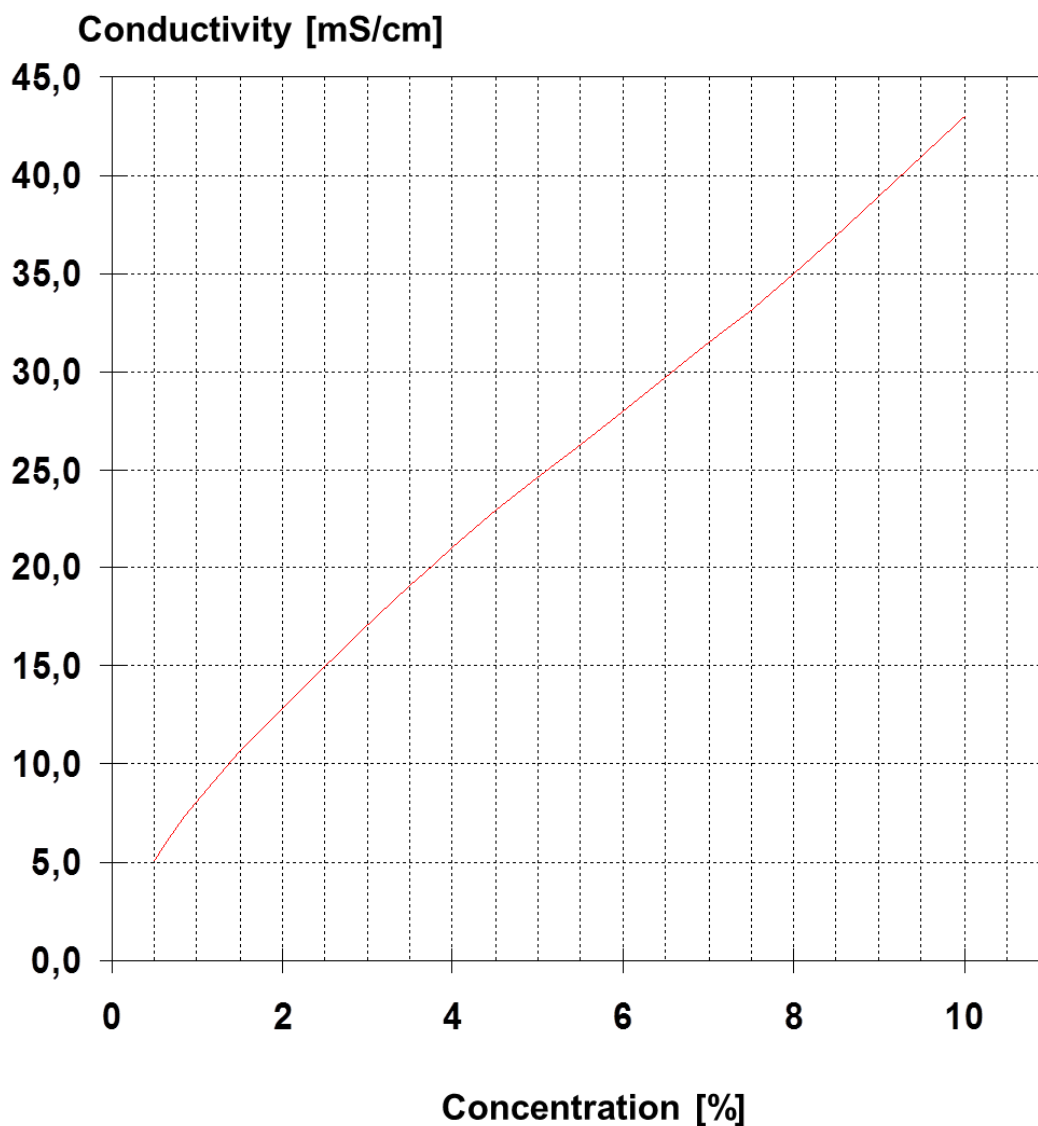
We recommend the use of P3-Elados-EMP-diaphragms pumps for metering and for control and phase separation of the **COSA CIP 77** solution the use of P3-LMIT 09 inductive conductivity meters.

## ***Safety***

The relevant Hazards identifications for COSA CIP 77 are given in the EC Safety Data Sheet. If any questions arise in this context please contact your Ecolab representative.

## COSA® CIP 77

Specific Conductivity (20°C, 0°d)  
Temperature coefficient:  $\alpha = 0.52 \text{ \%/}^\circ\text{C}$



The statements, information and data presented herein are believed to be accurate and reliable. The information describes the characteristic features of **COSA CIP 77** in ordinary use but can not be taken as a guarantee, express warranty or implied warranty for the suitability for a particular purpose and shall not extend mandatory warranty rights (if any). The specifications and performance may vary subject to the operational conditions. Since numerous parameters will influence product performance and applicability, this information does not exonerate the user from liability with respect to the suitability of the product and the appropriate safety measures to be taken. Moreover, a possible infringement of patent rights must be avoided at all times.

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