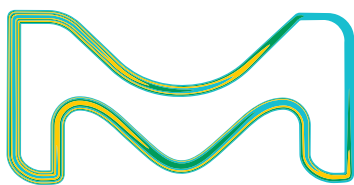


# cleaner

## Extran<sup>®</sup> detergents

The perfect solution for cleaning  
your laboratory utensils



The Life Science business  
of Merck operates as  
MilliporeSigma in the  
U.S. and Canada.

**Supelco<sup>®</sup>**  
Analytical Products

# Extran® reliable all-purpose detergents

Thorough, residue-free cleaning is essential for reliable processes. This applies to both: laboratories and production facilities. Everything that comes into contact with chemicals or biological substances must be free of impurities, both before and after use.

Put your trust in many years of Extran® detergents experience from Merck and use our detergents for **manual cleaning (MA)** or **machine cleaning** in laboratory washing machines (AP).

## Your advantages

Extran® detergents are a reliable cleaning agent of consistent composition that ensures proper scientific working procedures and avoids a frequently modification of processes and applications.

### **Reliable results**

by long-term detergent experience, constant product quality and composition, outstanding solubility and flowability

### **Environmental protection**

by bio-degradable active ingredients

### **Reliable residue-free cleaning with validation support**

to prove the absence of nonionic surfactants by means of a photometric test

### **Health protection**

no known allergy risk or smell nuisance because Extran® detergents are free of scent, dyestuff, oxidants, chlorine, enzymes and NTA. Extran® detergents replace toxic cleaning agents

### **Save time and money**

with highly concentrated Extran® detergents and technical application support

### **High flexibility and safety**

by a broad range of different pack sizes—from 1 L to 25 L, from 2 kg to 25 kg—and specially developed withdrawal products and adapters



## Validation support

As international and national laws and regulations are becoming ever strict, many facilities are increasingly dependent on being able to prove residue-free cleanliness. For this purpose Merck's photometric determination method provides a practical, easy to perform cleaning validation support.

### 1. Validation of the analytical system that is used

It needs to be assured, that the analytical system (e.g. the photometer) that is used, is capable to detect the residues in the range of concentration that is relevant for the desired cleaning validation.

### 2. Sample preparation

Usually surfaces are analyzed due to their quantitative content of a desired analyte. The sample preparation should be included to the validation of the system to determine the recovery rate.

### 3. Analysis of the sample

Any analysis needs to be reproducible and the procedure needs to be defined precisely. This steps are described at Merck's Application aid "Surfactants (nonionic) in Extran® rinse solutions". Please see our web documentation for valid application notes.



# cleaning applications

Properties										Cleaning applications						Applications	
Liquid	Powder	Acidic	Neutral	Mildly alkaline	Alkaline	Phosphate-free	Surfactant-free	Special properties			Food residues	Fat / wax / silicones	Organic residues	Inorganic residues	Colours / lacquer / pigments	Blood / cells / proteins	Instructions
<b>Manual cleaning</b>																	
•					•						••		••	••	••	••	Universal detergent for heavy contamination, even for water up to 40 °dH hardness. Suitable for cleaning of tables, tiles, floors and ultrasound cleaning. Not suitable for alkali-sensitive materials such as aluminum.
•			•									••	•	••	•		Universal detergent for a gentle but thorough cleaning of precision measuring devices made of glass, quartz and alkali sensitive metals. Also suitable for ultrasound cleaning.
•					•	•					•	••	•	•	••	•	Universal cleaner for heavy contamination including glass, quartz, porcelain, nonferrous metals and rubber, even for very hard water. Also suitable for ultrasound cleaning. Not suitable for alkali-sensitive materials such as aluminum.
<b>Aparative cleaning (dishwasher)</b>																	
	•			•		•			with glass & ceramics corrosion inhibitors		•	••	•	••	•	•	Gentle cleaning of alkali-sensitive items in dishwashers with liquid dosing. Not foaming.
	•			•		•					••	•	••	••	•••	••	Active cleaning for main wash cycle, even for heavily soiled items, removes dried or burned-on residues. Not foaming. Replaces Extran® AP13.
•				•	•	•					••	••		••	••	••	Active cleaning for main wash cycle, even for heavily soiled items in dishwashers with liquid dosing. Not foaming.
•				•		•	•				•			••	•	•	Gentle cleaning of alkali-sensitive items in dishwashers with liquid dosing. Not foaming.
•		•				•			with phosphoric acid with glass & ceramics corrosion inhibitors		•	•	••	•			Pre-wash for residues of carbonates, hydroxides, proteins, amines, etc. Suitable for rinsing with neutralising effect. Also suitable for gentle main wash cycle. Prevents calcareous deposits.
•		•				•			with citric acid		•	•	••	•			Gentle pre-wash and rinsing agent with neutralising effect. Also suitable for gentle main wash cycle. Prevents calcareous deposits.
	•							?	enzymatic		••	••	•	•			For laboratories with medical and dental utensils. For the removal of mucus, saliva, blood etc. Ideal cleaning temperature at 55–65 °C.

- very good suitability
- very high suitability
- special suitability



**Product information**

Concentration	Product	Ordering information	Packaging Extension	Packaging Designation
<b>Manual cleaning</b>				
2-5-20 %	Extran® MA 01	107555	1000	PE bottle
			2500	PE bottle
			5000	PE bottle
			9010	PE canister
			9025	PE canister
2-5-20 %	Extran® MA 02	107553	2500	PE bottle
			5000	PE bottle
			9010	PE canister
			9025	PE canister
2-5-20 %	Extran® MA 05	140000	2500	PE bottle
			5000	PE bottle
			9010	PE canister
			9025	PE canister
<b>Aparative cleaning (dishwasher)</b>				
20-40 g / 10 L	Extran® AP 11	107558	2000	PE bottle
			9010	PE drum
			9025	PE drum
20-40 g / 10 L	Extran® AP 12	107563	2000	PE bottle
			9010	PE drum
			9025	PE drum
30-50 mL / 10 L	Extran® AP 17	140006	2500	PE bottle
			5000	PE bottle
			5001 <b>NEW</b>	PE canister
			9010	PE canister
			9025	PE canister
30-50 mL / 10 L	Extran® AP 18	140118	2500	PE bottle
			5000	PE bottle
			5001 <b>NEW</b>	PE canister
			9025	PE canister
			9010	PE canister
10-30 mL / 10 L	Extran® AP 21	107559	2500	PE bottle
			5001 <b>NEW</b>	PE canister
			9010	PE canister
			9025	PE canister
10-30 mL / 10 L	Extran® AP 22	107561	2500	PE bottle
			5001 <b>NEW</b>	PE canister
			9010	PE canister
			9025	PE canister
	Extran® AP 41	107570	2000	PE bottle
<b>Specialities</b>				
	Sodium hydroxide solution 10%	105588		
	Sodium hydroxide solution 21%	105593		
	Sodium hydroxide solution 32%	105587		
	Sodium hydroxide solution 50%	158793		
	Sodium perborate tetrahydrate	106560		
	Chloramine T trihydrate	102424		
<b>Accessories</b>				
	Adapter (PP) KS 60x6 to 54 mm	9.67212.0001		
	Tap (PE) for Extran® canisters with KS 60x6 external tread	1.12937.0001		
	Adapter (PTFE) S40 (bottle thread) to S38 (outer thread)	9.67207.0001		
	Adapter (PTFE) S40 (bottle thread) to GL45 (outer thread)	1.67206.0001		



# Manual washing

The Extran® MA types for manual washing are universally applicable concentrates for the production of cleaning baths which work reliably and without residue.

- Water is used to prepare the cleaning solution. If slight sedimentation of the hardener occurs, more Extran® detergents must be added. De-mineralized water boosts the cleaning effect.
- For cleaning, the items to be cleaned are simply immersed completely in the solution.
- Once cleaning is finished, they are rinsed first with tap water and then with demineralised water.
- The baths can be used for a longer time without a noticeable decrease in the cleaning effect.
- If necessary, the rinsing liquid can be supplemented with fresh Extran® detergents.
- The length of application is less than 2 hours.
- For “difficult cases” such as plaster, blood or heavy oil, the items to be cleaned are simply left in the bath a little longer.
- Heat speeds up the cleaning process.
- Extran® detergents are also ideally suited to ultrasound cleaning.

## Extran® MA 01 liquid, alkaline

<b>Properties</b>	<ul style="list-style-type: none"><li>• Liquid</li><li>• Alkaline</li><li>• Chlorine-free</li><li>• Free from odorants/dyestuffs</li></ul>
<b>pH value</b>	(5%; water) 11.0–12.0
<b>Ingredients</b>	Ionic and non-ionic surfactants, phosphates, excipients in low quantities
<b>Application advice</b>	Universal cleaner for the removal of heavy contamination. In wiping tables, tiles, floors. In soaking for the automated cleaning of laboratory equipment. Do not use on alkali-sensitive materials such as aluminum.
<b>Dosing</b>	The ideal dosage depends on the hardness of the water and the level of contamination of the item to be cleaned. <b>Recommended application concentrations:</b> <ul style="list-style-type: none"><li>• For normal contamination: 2%</li><li>• For heavier contamination: 5%</li><li>• For very tough stains up to 20%</li></ul>

### Ordering information

Pack size	Packaging	Ord. No.
2.5 L	PE bottle	1.07555.2500
5 L	PE bottle	1.07555.5000
10 L	PE can	1.07555.9010
25 L	PE can	1.07555.9025

## Extran<sup>®</sup> MA 02 liquid, neutral

<b>Properties</b>	<ul style="list-style-type: none"><li>• Liquid</li><li>• Neutral</li><li>• Chlorine-free</li><li>• Free from odorants/dyestuffs</li></ul>
<b>pH value</b>	(5%; water) 6–8
<b>Ingredients</b>	Ionic and non-ionic surfactants, phosphates, excipients in low quantities
<b>Application advice</b>	Universal cleaner for the gentle cleaning of appliances made from alkali-sensitive metals such as aluminum, zinc and alloys with similar behavior. Suitable for metal appliances and precision measuring devices made from glass and quartz such as burettes, pipettes, cells, blood gas analyzers and other medical equipment which is sensitive to aggressive detergents and also rarely has problematic contamination.
<b>Dosing</b>	The ideal dosing depends on the hardness of the water and the level of contamination of the item to be cleaned. <b>Recommended application concentrations:</b> <ul style="list-style-type: none"><li>• For normal contamination: 2%</li><li>• For heavy contamination: 5%</li><li>• For dried on or stubborn residues up to 20%</li></ul>

### Ordering information

Pack size	Packaging	Ord. No.
2.5 L	PE bottle	1.07553.2500
5 L	PE bottle	1.07553.5000
10 L	PE can	1.07553.9010
25 L	PE can	1.07553.9025

## Extran<sup>®</sup> MA 05 liquid, alkaline, phosphate-free

<b>Properties</b>	<ul style="list-style-type: none"><li>• Liquid</li><li>• Alkaline</li><li>• Chlorine-free</li><li>• Free from odorants/dyestuffs</li><li>• Phosphate-free</li></ul>
<b>pH value</b>	Sequestering agent content (alkalimetric) 8.5–10.0% Free alkali (as NaOH) 1.5–2.5%
<b>Ingredients</b>	Anionic and non-ionic surfactants, alkalescent additives, free of NTA (nitrilotri acetic acid)
<b>Application advice</b>	Universal cleaner for the removal of heavy contamination. Unlimited use also possible with very hard water. Do not use on alkali-sensitive materials such as aluminum.  Use is especially recommended anywhere where micro-phosphate tests are carried out.
<b>Dosing</b>	The ideal dosage depends on the hardness of the water and the level of contamination of the items to be cleaned. <b>Recommended application concentrations:</b> <ul style="list-style-type: none"><li>• For normal contamination: 2%</li><li>• For heavy contamination: 5%</li><li>• For very tough stains up to 20%</li></ul>

### Ordering information

Pack size	Packaging	Ord. No.
2.5 L	PE bottle	1.40000.2500
5 L	PE bottle	1.40000.5000
10 L	PE can	1.40000.9010
25 L	PE can	1.40000.9025

# Sodium hydroxide solution

## Properties

- Liquid
- Strongly alkaline
- Chlorine-free

## Ingredients

Ionic and non-ionic surfactants, phosphates, excipients in low quantities

## Application advice

Basic cleaning agent in various concentrations (10%-50%) in premium Merck quality. The high purity of these solutions make these sodium liquids suitable above all for cleaning applications in which residues from surfactants or complexation agents are to be avoided. Through the use of these prepared solutions, the time-consuming and dangerous breakdown of solid sodium hydroxide can be avoided.

## Ordering information

Designation	Assay	Pack size	Packaging	Ord. No.
Sodium hydroxide solution min. 10% (1.11) for analysis EMSURE®	min. 10% (1.11)	1 L	HDPE bottle	<b>1.05588.1000</b>
		10 L	PE canister	<b>1.05588.9010</b>
Sodium hydroxide solution 21% for analysis EMSURE®	21%	25 L	PE canister	<b>1.05593.9025</b>
Sodium hydroxide solution about 32% EMPLURA®	about 32%	2.5 L	HDPE bottle	<b>1.05587.2500</b>
		5 L	HDPE bottle	<b>1.05587.5000</b>
		25 L	PE canister	<b>1.05587.9025</b>
		200 L	PE drum	<b>1.05587.9200</b>
Sodium hydroxide solution about 36% for analysis EMSURE®	about 36%	5 L	HDPE bottle	<b>1.05596.5000</b>
Sodium hydroxide solution min. 45% for analysis EMSURE®	min. 45%	2.5 L	HDPE bottle	<b>1.11360.2500</b>
		25 L	PE canister	<b>1.11360.9025</b>
Sodium hydroxide solution 50% for analysis EMSURE®	50%	1 L	HDPE bottle	<b>1.58793.1000</b>
		5 L	HDPE bottle	<b>1.58793.5000</b>
		25 L	PE canister	<b>1.58793.9025</b>
		200 L	PE drum	<b>1.58793.9200</b>





# Extran® detergents in NEW 5L canister

Experience the new safety and simplicity perfectly aligned to your lab dishwasher

Careful cleaning is essential in every lab. But it can pose risks and challenges, like accidental contact with harmful cleaner concentrates, frequent refilling of cleaning agents, or costly dishwasher repairs.

That's why we now also offer our **powerful, non-toxic, residue-free and biodegradable Extran® cleaners in new 5L canisters**—making them the **ideal fit for lab dishwashers**. Discover quality perfected for your intended use and eliminate hassles and hazards.

## The multi-purpose cleaner with multiple benefits

### Safe

- Connected canister avoids contact with harmful acidic or alkaline cleaners
- Product and safety information always visible on top label
- Top label with blank space for quick documentation of individual GLP handling dates and unique color coding acc. to pH

### Ecological

- Extran® cleaners contain non-toxic, biodegradable active ingredients

### Economical

- Avoid costly repairs from sediment buildup in refilled canisters
- Save resources through direct connection using concentrates

### Convenient

- Canister fits in most dishwashers, with standard thread for direct connection
- No need to clean dishwasher canisters or refill from smaller bottles
- Easy to use thanks to light weight and large handle

### Top label with contents & essential safety information

Order no. 1.40118.5001

Exact product designation (EN) Extran® AP 18  
liquid, mild alkaline concentrate

ALKALINE

Color coded with clear designation acc. to pH of the cleaner  
Blue = alkaline  
Red = acidic

Hazard classification/pictogram

RECEIVED: \_\_\_\_\_

OPENED: \_\_\_\_\_

EXP. DATE: \_\_\_\_\_

Space for individual documentation with permanent marker

### H+P statements & handling instructions

### Optimal size and design

Allows direct connection to most lab dishwashers



# Automated cleaning

The various types of Extran® AP were created in cooperation with leading appliance manufacturers especially for use in laboratory washing machines and tested in these machines for suitability. As well as a distinctive cleaning power with extensive universal effects, the very low formation of foam is also an important property. The good solubility in water of all components minimises residues on appliances which have been cleaned.

To neutralize displaces alkali residues and remove remaining traces of alkali, an acid rinsing agent should be used after every main wash cycle.

## Suitable as neutralizing agents are:

- Extran® AP 21 acidic with phosphoric acid
- Extran® AP 22 acidic with citric acid



## Extran® AP 11 powder, mild alkaline

<b>Properties</b>	<ul style="list-style-type: none"> <li>• Powder</li> <li>• Chlorine-free</li> <li>• Mild alkaline</li> <li>• Contains a corrosion inhibitor</li> <li>• Free from surfactants</li> <li>• Free from odorants/dyestuffs</li> </ul>
<b>pH value</b>	(1%; water) ≥ 11.5–12.5
<b>Ingredients</b>	Phosphates, alkali salts
<b>Application advice</b>	Universal cleaning agent for the gentle cleaning of alkali-sensitive items. Cleaning of items which cannot be tainted with allergenic detergents, such as jewellery, glasses. A corrosion inhibitor is included for the intensive prevention of corrosion of glass and ceramics. Extran® AP 11 mild alkaline does not foam even during heavy agitation of the solution in a washing machine.
<b>Dosing</b>	<p>The ideal dosage depends on the hardness of the water and the level of contamination of the items to be cleaned.</p> <ul style="list-style-type: none"> <li>• Under normal conditions, the concentration for application is 0.2–0.4%, i.e. 20–40 g of Extran® AP 11 are used for around 10 L of water</li> <li>• The pH value of a 0.3% solution when ready for use is pH = 11.3</li> </ul>

### Ordering information

Pack size	Packaging	Ord. No.
2 kg	PE bottle	1.07558.2000
10 kg	PE drum	1.07558.9010
25 kg	PE drum	1.07558.9025

## Extran® AP 12 powder, alkaline

<b>Properties</b>	<p>Extran® AP 12 is free from organic surfactants and emulsifiers.</p> <ul style="list-style-type: none"> <li>• Powder</li> <li>• Alkaline</li> <li>• Surfactant-free</li> <li>• Chlorine-free</li> <li>• Free from odorants/dyestuffs</li> </ul>
<b>pH value</b>	(1%; water) ≥ 12.5
<b>Ingredients</b>	Phosphates, sodium hydroxide, alkali salts
<b>Application advice</b>	Active universal cleaning agent for the main wash cycle, which cleans even heavily soiled items and removes dried or burned-on residues. Particularly suitable for the removal of starch and protein residues. Extran® AP 12 alkaline does not foam even during heavy agitation of the solution in a washing machine.
<b>Dosing</b>	<p>The ideal dosing depends on the hardness of the water and the level of contamination of the item to be cleaned.</p> <ul style="list-style-type: none"> <li>• Under normal conditions, the concentration for application is 0.2–0.4%, i.e. 20–40 g of Extran® AP 12 are used for around 10 L of water</li> </ul>

### Ordering information

Pack size	Packaging	Ord. No.
2 kg	PE bottle	1.07563.2000
10 kg	PE drum	1.07563.9010
25 kg	PE drum	1.07563.9025

## Extran® AP 17 liquid, alkaline

<b>Properties</b>	Extran® AP 17 is free from organic surfactants and emulsifiers, but contains complexing agents and can therefore be used in both soft and hard water. <ul style="list-style-type: none"> <li>• Liquid</li> <li>• Alkaline</li> <li>• Phosphate-free</li> <li>• Surfactant-free</li> <li>• Chlorine-free</li> <li>• Free from odorants/dyestuffs</li> </ul>
<b>pH value</b>	Sequestering agent content (complexometric) 29.5–34.5% Free alkali (as NaOH) 4.3–5.3%
<b>Ingredients</b>	Complexing agents, sodium hydroxide solution
<b>Application advice</b>	Active universal cleaning agent for the main wash cycle which cleans and removes even heavily soiled items. Particularly suitable for the removal of starch and protein residues. Extran® AP 17 alkaline does not foam even during heavy agitation in a washing machine.
<b>Dosing</b>	The ideal dosing depends on the hardness of the water and the level of contamination of the items to be cleaned. <ul style="list-style-type: none"> <li>• Under normal conditions, the concentration for application is 0.3–0.5%, i.e. 30–50 mL of Extran® AP 17 are used in around 10 L of water</li> </ul>

### Ordering information

Pack size	Packaging	Ord. No.
2.5 L	PE bottle	1.40006.2500
5 L	PE bottle	1.40006.5000
5 L	PE canister	1.40006.5001 <b>NEW!</b>
10 L	PE can	1.40006.9010
25 L	PE can	1.40006.9025
Accessories		
Adapter (PP) for 10 L and 25 L Extran® canister (KS 60 × 6 to 54 mm)		9.67212.0001

## Extran® AP 18 liquid, mild alkaline

<b>Properties</b>	Extran® AP 18 mild alkaline is a liquid main cleaning agent with mild alkaline properties for automatic dosing. <ul style="list-style-type: none"> <li>• Liquid</li> <li>• Mild alkaline</li> <li>• Phosphate-free</li> <li>• Surfactant-free</li> <li>• Chlorine-free</li> <li>• Free from odorants/dyestuffs</li> </ul>
<b>pH value</b>	Sequestering agent content (complexometric) 33.0–36.0% Free alkali (as ammonia) 3.0–4.0%
<b>Ingredients</b>	Complexing agents, alkali salts
<b>Application advice</b>	Universal cleaning agent for the gentle cleaning of alkali-sensitive items. Cleaning of items which cannot be tainted with allergenic detergents, e.g. jewellery, glasses. Extran® AP 18 mild alkaline does not foam even during heavy agitation in a washing machine.
<b>Dosing</b>	The ideal dosing depends on the hardness of the water and the level of contamination of the item to be cleaned. <ul style="list-style-type: none"> <li>• Under normal conditions, the concentration for application is 0.3–0.5%, i.e. 30–50 mL of Extran® AP 18 are used for around 10 L of water</li> </ul>

### Ordering information

Pack size	Packaging	Ord. No.
2.5 L	PE bottle	1.40118.2500
5 L	PE bottle	1.40118.5000
5 L	PE canister	1.40118.5001 <b>NEW!</b>
10 L	PE can	1.40118.9010
25 L	PE can	1.40118.9025
Accessories		
Adapter (PP) for 10 L and 25 L Extran® canister (KS 60 × 6 to 54 mm)		9.67212.0001

## Extran® AP 21 liquid, acidic with phosphoric acid

<b>Properties</b>	Extran® AP 21 is an acidic pre-wash and neutralisation agent with a phosphoric acid base. <ul style="list-style-type: none"> <li>• Liquid</li> <li>• Acidic</li> <li>• Surfactant-free</li> <li>• Chlorine-free</li> <li>• Free from odorants and dyestuffs</li> </ul>
<b>Ingredients</b>	Phosphoric acid
<b>Application advice</b>	The acid special cleaner can be used both as a pre-wash agent and a rinsing agent with a neutralising effect. When used as a pre-wash agent, it primarily dissolves carbonates and hydroxides from the residues. Protein substances and organic bases, such as amines, are often removed better in an acidic pre-wash as in an alkaline main wash cycle. As a rinsing agent, i.e. after the alkaline main wash cycle, it is especially suitable for removing remaining traces of alkali on the cleaned material or, in the case of solution carry-over, for neutralisation. This acidic cleaning agent is also well suited to the removal of calcareous deposits in the washing machine.
<b>Dosing</b>	Added automatically using a dosing device or manually. <ul style="list-style-type: none"> <li>• The concentration for application is around 0.1–0.3%, i.e. 10–30 mL of Extran® AP 21 are added to around 10 L of water</li> </ul>

### Ordering information

Pack size	Packaging	Ord. No.
2.5 L	PE bottle	1.07559.2500
5 L	PE canister	1.07559.5001 <b>NEW!</b>
10 L	PE can	1.07559.9010
25 L	PE can	1.07559.9025

#### Accessories

Adapter (PP) for 10 L and 25 L Extran® canister (KS 60 × 6 to 54 mm)	9.67212.0001
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## Extran® AP 22 liquid, acidic with citric acid

<b>Properties</b>	Extran® AP 22 is a phosphate-free, acidic pre-wash and neutralisation agent with a citric acid base.
<b>pH value</b>	Free acid (as citric acid) 32.0–35.0%
<b>Ingredients</b>	Citric acid, non-ionic surfactants, low levels of excipients
<b>Application advice</b>	<p>The acidic special cleaner can be used both as a pre-wash agent and a rinsing agent with a neutralising effect.</p> <p>When used as a <b>pre-wash agent</b>, it primarily dissolves carbonates and hydroxides from the residues. Protein substances and organic bases, such as amines, are often removed better in an acidic pre-wash as in an alkaline main wash cycle.</p> <p>As a <b>rinsing agent</b>, i.e. after the alkaline main wash cycle, it is especially suitable for removing remaining traces of alkali on the cleaned material or, in the case of solution carry-over, for neutralisation. This acidic cleaning agent is also well suited to the removal of calcareous deposits in the washing machine.</p> <p>The product is recommended for cases in which gentle conditions must be maintained for particular reasons. Particularly suitable for the gentle removal of calcareous deposits, e.g. on taps or sensitive metal and glass surfaces.</p>
<b>Dosing</b>	Added automatically using a dosing device or manually. <ul style="list-style-type: none"> <li>• The concentration for use is around 0.1–0.3%, i.e. 10–30 mL Extran® AP 22 are used for around 10 L of water</li> </ul>

### Ordering information

Pack size	Packaging	Ord. No.
2.5 L	PE bottle	1.07561.2500
5 L	PE canister	1.07561.5001 <b>NEW!</b>
10 L	PE can	1.07561.9010
25 L	PE can	1.07561.9025

#### Accessories

Adapter (PP) for 10 L and 25 L Extran® canister (KS 60 × 6 to 54 mm)	9.67212.0001
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## Extran® AP 41 powder, enzymatic

**pH value** (1%; water) 11.0–12.0

**Ingredients** Enzymes, phosphates, alkali salts

**Application advice** Alkaline cleaning agent for use in washing machines. Especially for the removal of dried tissue and saliva residues, of mucus, protein and blood, in catheters, breathing tubes, breathing bags etc.

Ideal conditions for cleaning are between 55 and 65 °C, since the enzymes do not work above 70 °C. We recommend Extran® AP 22 acidic with citric acid as an acidic rinsing agent.

**Dosing** The recommended concentration for application is 0.3%, i.e. 30 g of Extran® AP 41 are used for each 10 L wash cycle.

### Ordering information

Pack size	Packaging	Ord. No.
2 kg	PE bottle	1.07570.2000
25 kg	PE drum	1.07570.9025



# connective accessories

## The universal adapter

The Extran® universal adapter enables secure connections between various machines and Merck's 10 L or 25 L cleaning canisters. It is particularly useful for cleaning equipment, as larger quantities of detergent are required. The adapter ensures canisters remain spray-safe and tightly connected to the machines. This not only avoids spillages and increases user safety, but also prevents external contamination. Thanks to its universal design, the Extran® adapter overcomes worldwide differences in cleaning equipment and connection systems.

### Features and Benefits

- **Safety and health protection:** Spillage is avoided due to secure connection between canister and machine
- **Reliability:** Analysis is protected from external contamination, ensuring reliable results

### Ordering information

Product	Ord. No.
Adapter (PP) for 10 L and 25 L Extran® canister (KS 60 × 6 to 54 mm)	9.67212.0001



## Taps, adapters & accessories

Additional products for safe handling, direct withdrawal and increased connectivity of the several Extran® pack sizes are available with main scope on your safe and individual daily work, e.g. canister adapters for direct connection to dishwashers or labels for comprehensive safety labelling of own mixtures.



### Ordering information

Product	Ord. No.
Tap (PE) for use with 5, 10, 25 L PE canisters with KS 60X6 external thread	1.12937.0001
Bottle adapter (PTFE), S40 (bottle thread) to S38 (outer thread)	1.67207.0001
Bottle adapter (PTFE), S40 (bottle thread) to GL45 (outer thread)	1.67206.0001
Bottle key for use with bottles with S 40 and S 28 screw caps	1.08801.0001
Container key for use with containers with KS 60x6 screw cap	1.08804.0001
Label set acc. GHS, 20 blank adhesive labels (168 pictograms and 40 signal words)	1.00801.0001

# Supelco®

Analytical Products

Merck KGaA  
Frankfurter Strasse 250  
64293 Darmstadt, Germany

**SigmaAldrich.com**

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MK\_BR4401EN Ver. 0.0  
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04/2022