

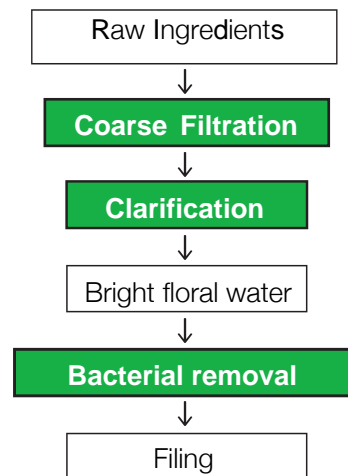


# Filtration of Cosmetics

Filtration is a crucial step in the production of cosmetic products. Although there are many different cosmetic products (floral water, cream, perfume...), they all require critical operations to guarantee the integrity of the production process and produce perfect finished products. The right filtration system is essential to guarantee biological safety, product quality and shelf life, as well as to protect processing equipment. Global Filter designs and manufactures filter vessels and filter elements for the cosmetics industry. Our expertise also enables us to optimize your manufacturing process.

- We operate on three key stages of any cosmetic production: First, a bulk filtration step, to remove all unwanted large particles (coarse filtration) such as small pieces of branches, leaves and petals, making the final product visually clear. For this step, we recommend using Global Filter's polypropylene meltblown depth cartridge with a 20 micron pore rating.
- For the clarification step, depending on the cosmetic's composition (solid content, micro-organisms contents), we recommend using Global Filter's **pleated polypropylene cartridges (PP-Series)** and/or **pleated depth polypropylene cartridges (GHLS series)** with a pore size rating of 1 to 3 micron. The PP-Series cartridge offers a low pressure drop, and high load capacity. This step also protects the membrane filter from being overloaded with particles and prematurely clogging.
- Before bottling, the third and final filtration step provides clarity to the cosmetic product while removing microbial contaminants, that can potentially induce bottled fermentation, and that would interfere with the hydrolat's preservation. For microbial contaminant removal, 0.2 micron rated **PES membrane cartridges** are recommended. Removing the microorganisms provides a stable product, free from microbial contaminants.
- Global Filter's products can ensure sterile effluent free of microbial contaminants, providing cleanliness to wash/ rinse water and fluid utility lines.
- Holding tank vents should utilize filtration to remove all contaminants from ambient and process air.

## Typical Cosmetics' Process Flow





# Our Solutions For Cosmetics' Filtration

Filtration Group produces best-in-class filtration solutions to make the world safer, healthier and more productive. Since 1930, our businesses (Eurofiltec, amafilter, LFC Lochem, now Global Filter) are known for filtration and separating solids from liquids. We find the best solutions for our customers' most challenging applications. Cosmetics purification requires many separation techniques, and in particular, mechanical filtration. Global Filter designs and manufactures filtration elements (filter cartridges, bags) and sanitary vessels for the cosmetic industry.

## Filters for clarification:

For coarse particulate retention, polypropylene pleated cartridges are an optimal choice (PP- Series).

With a pore size rating from 0.45µm to 40µm, our micro-glass borosilicate **FG-Series** is suitable for colloid filtration, food contact and does not interfere with the properties of floral waters. The FG-Series elements also protect membrane cartridges. As a result, they promote less maintenance and production downtime. In addition, Global Filter's short lead times limit the amount of on-hand inventory required by the user.

## Filters for tank vents and utilities:

We provide optimal solutions that limit the contamination of your products by offering filtration products to service process fluid lines. Global Filter's **WCPES** filter cartridges are able to remove sub-micron particulate from process water. Our range of **PTFE** membrane cartridges allows for removal of microbial contaminants by filtering tank vents.

## Filters for microbial filtration:

Our solutions are designed to ensure the performance and quality. Our range of **PES membrane cartridges**, such as, **GFPEs**, **GBPEs** and **BRPEs**, are integrity tested prior to leaving the manufacturing facility to ensure they adhere to bacterial removal standards. The end-user's process and operating requirements will dictate which Global Filter PES product and which micron rating is most optimal. This is often determined by the type of floral water produced.

## Global Filter Main Advantages:

- Production in 10 days
- Manufacturing facilities in North America, Europe and Japan
- Competitive prices and highest value in the industry
- The design, development and manufacture of all our products meet the construction standards D.E.S.P 2014/68/EU, NSF, USP, FDA, CE 1935/2004
- Technical support from initial conversations to implementation and continued process assistance
- Our solutions are based on our expertise as well as laboratory and industrial certified testing
- We are able to offer products for small-scale production as well as higher volume operations

## Product Advantages:

- Production in North America, Europe (France) and Japan
- Production in 10 days
- Rating down to 0.01 µm
- Range from prefiltration to sterilizing grade
- Manufactured according to EU and US standards
- Large choice of media for a wide range of applications

