

### Application Information:

#### Cleaning of Cosmetic Creams and Lotions from Laboratory Glassware

Cosmetic creams and lotions are typically thick non-water soluble emulsions that adhere to the surface of glassware. While pre-rinsing with hot water helps clean prior to hand washing; removal of the thin film, which remains still poses a problem. To overcome this, technicians use a very strong alkaline detergent – but in most cases – this compounds the problem, leaving a hard “skin” that is more difficult to clean. For best results: A mild detergent in combination with an emulsifier should be used along with as much water as possible passing over the glassware surface. This is most effectively done in a laboratory glassware washer – specifically, The PG 8536

#### Temperature

In general, hotter water provides better cleaning and rinsing. The Miele PG 8536 glassware washer can heat wash and DI water up to 95°C. Additionally, wash and DI water temperatures are independently adjustable for maximum flexibility dependent upon the cleaning application. For cleaning of cosmetic creams and lotions a wash temperature of 95° C is normally recommended.

#### Mechanical Action

High pressure does not necessarily provide good cleaning results. The problem: high pressure can translate into delicate glassware breakage. Miele’s high turnover rate (circulation) of water at a low discharge pressure provides the best results without risk of glassware breakage. How often the water and detergent contact the surface to be cleaned is actually more important than how hard it hits. Using only 3.8 gallons of water per fill, the Miele PG 8536 glassware washer circulates at a rate of 156 gallons per minute.

This compares with 25 gpm for typical household dishwashers and 60 gpm for typical lab washers. Miele’s high circulation rate ensures analytically clean results, reduces the wash time required, aids in energy efficiency and allows for lower detergent usage.

Additionally, the lower spray arm features special spray nozzles which angle and feather the jet spray for maximum coverage and impingement. It is also equipped with spray arm sensors which alert user if there is blockage.

#### Time

Increasing the time of a wash cycle will improve the cleaning results. Yet most labs cannot afford to spend time waiting for a washer to complete long cycles. Because Miele systems feature high circulation rates and extremely hot water, shorter cycle times can be accomplished without sacrificing cleaning results.

#### Detergent

Selecting the proper detergent is an important step in achieving critically clean glassware. In this application stronger detergents may actually hinder the cleaning process. For cosmetic creams and lotions ( see table at right) This combination prevents the formation of hard-to-clean surface skin, ensuring analytically clean results.

#### The Miele Solution

The effective cleaning cycle for this application is found in the PG 8536 Laboratory Glassware Washer. In combination with wash protocols designed by Miele specifically for cosmetic applications, the PG 8536 provides repeatable analytically clean results.

#### Direct Injection Baskets

If you are cleaning narrow-necked items such as volumetric or Erlenmeyer flasks, direct injection baskets provide remarkably clean results for hard-to-reach interiors. These direct injector baskets utilize a unique radical design where water reaches the end of each injector with equal pressure. This assures that all items are cleaned with the same outstanding results. Some manufactures use a grid type injector design, where water pressure may be inadequate on injectors which are farthest from the feed tube. Furthermore, these injector tubes are available in a variety diameters and lengths for various glassware sizes – and can be easily arranged for custom basket configuration.

#### Conclusion

In summary, the Miele PG 8536 Laboratory Glassware Washer equipped with the proper wash protocol, baskets and detergents provides thorough cleaning of cosmetic creams and lotions from laboratory glassware.

Recommended Detergents:  
neodisher™ MA - mild alkaline based detergent



For further information contact Miele Professional at [www.miele-pro.com](http://www.miele-pro.com) or 1-800 843-7231