



CREAM, GEL AND SUPPOSITORY

THE ENGINEERING BEHIND HIGH-VISCOSITY PRODUCTS



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Cream, gel
and suppository
plants have to handle
high-viscosity
products

The engineering has to therefore take into account the physical characteristics of the product and the interaction of the various ingredients, in order to design a plant which will produce a smooth and stable drug or cosmetic. To this extent, top mounted agitator and high-speed homogenizer are usually applied.



CIP on integrated skid

Temperature Control Module is fundamental too, because it allows to melt excipients – where the API is added, to keep the temperature stable and to have a full control of temperature settings.

Ideally the plant can be equipped with a CIP station, where acid and base additions can assure the cleanliness of vessels and distribution piping.



MANUFACTURING PROCESS

The right equipment
is crucial to guarantee
quality products

The manufacturing process consists in melting a base composed of excipients (glycerol-gelatin or polyethylene glycol, for example), adding active ingredients.

The compound is poured into the mold and is later subjected to cooling. On the other hand, cream is topical medication, formulated either as oil-in-water or water-in-oil emulsion, containing emollients, lubricants, thickening agents and active principle, of course.

For these kinds of formulation, several problems can arise during the process, such as agglomerations, clumps on walls of the vessel or on the agitator, non-stable emulsion. Thus, the right equipment is crucial to guarantee quality products, repeatable in process, with no clumps and stable.



FULL CONTROL OF PARAMETERS

Automation system can be designed, it is compliant with GAMP 5 and FDA 21 CFR Part. 11 and is based on modular PLC interfaced with I/O devices. The plant can be equipped with multiple HMI and managed by a full SCADA for recipe, batch management, data storage and reporting.



**WE LISTEN, WE DESIGN,
WE CREATE WITH PASSION.**

IT IS THE MIND THAT SHAPES THE STEEL

Solutions for the
pharmaceutical and
biotechnological industries



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