INOXPA MIX-Type Skid Application
Personal Hygiene: Production of Clay Facial Mask

I Introduction

A clay facial mask is a dermocosmetic product used to remove impurities from the skin. The difference between cosmetics and dermocosmetics is their use. Cosmetics are used to protect, repair or correct defects and to perfume, such as make-up, hair care products and deodorants, amongst others. Dermocosmetic products cure or control skin diseases or alterations such as acne, dermatitis, wrinkles, stains, etc.

I Manufacture of a clay facial mask

The typical composition is:
- Powdered clay
- Demineralized water
- Surfactants
- Additives

The components and their respective proportions may vary depending on the manufacturer or application.

The manufacturing process starts with the addition of water and surfactants. A pre-mix is prepared and the powdered clay slowly added using the vacuum skid. Once the mixture is homogeneous, the additives are added.

I INOXPA solution

INOXPA offers a mono-block skid, the MIX-4, to produce this particular type of product.

This skid comprises a main tank with two agitators, a central anchor and an agitator with saw tooth propeller, an ancillary tank with an agitator with saw tooth propeller, a Kiber pump (progressive cavity pump) for product discharge, a complete vacuum skid and an electrical control panel. It also includes a dosing system with weight control.

The system is arranged as a single block assembly that is electrically interconnected and ready to operate when connected to the required ancillary services. The whole unit is mounted on a metal support frame which incorporates the electrical and pneumatic panel and installation.

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I Example of a typical clay facial mask formula

Components	Classification	Percentage
Powdered clay	Absorbent	70 %
Demineralised water	Solvent	27 %
Sodium lauryl sulfate	Anionic surfactant	2.3 %
Aromas	Perfume	0.5 %
Glycerine	Humectant	0.1 %
Preservative	Preservative	0.1 %

Part of the water is added to the ancillary tank. The required quantity of each component is added individually using the weighing system throughout the process.
The agitator with saw tooth propeller is started at a medium speed and the surfactant, water and then glycerine is added.
The remaining water is added to the main skid tank. The anchor-type agitator is started at a slow speed, followed by the agitator with saw tooth propeller at a medium speed. The vacuum skid is started and the mixture is transferred from the ancillary tank to the main tank. Once all the mixture is in the main tank, the powdered clay is added using the vacuum device.
Finally, when the product forms a homogeneous mixture, the vacuum skid is stopped and the preservative and aroma is added. After a few minutes of slow agitation, discharge is started. To facilitate this process, there is a Kiber progressive cavity pump.

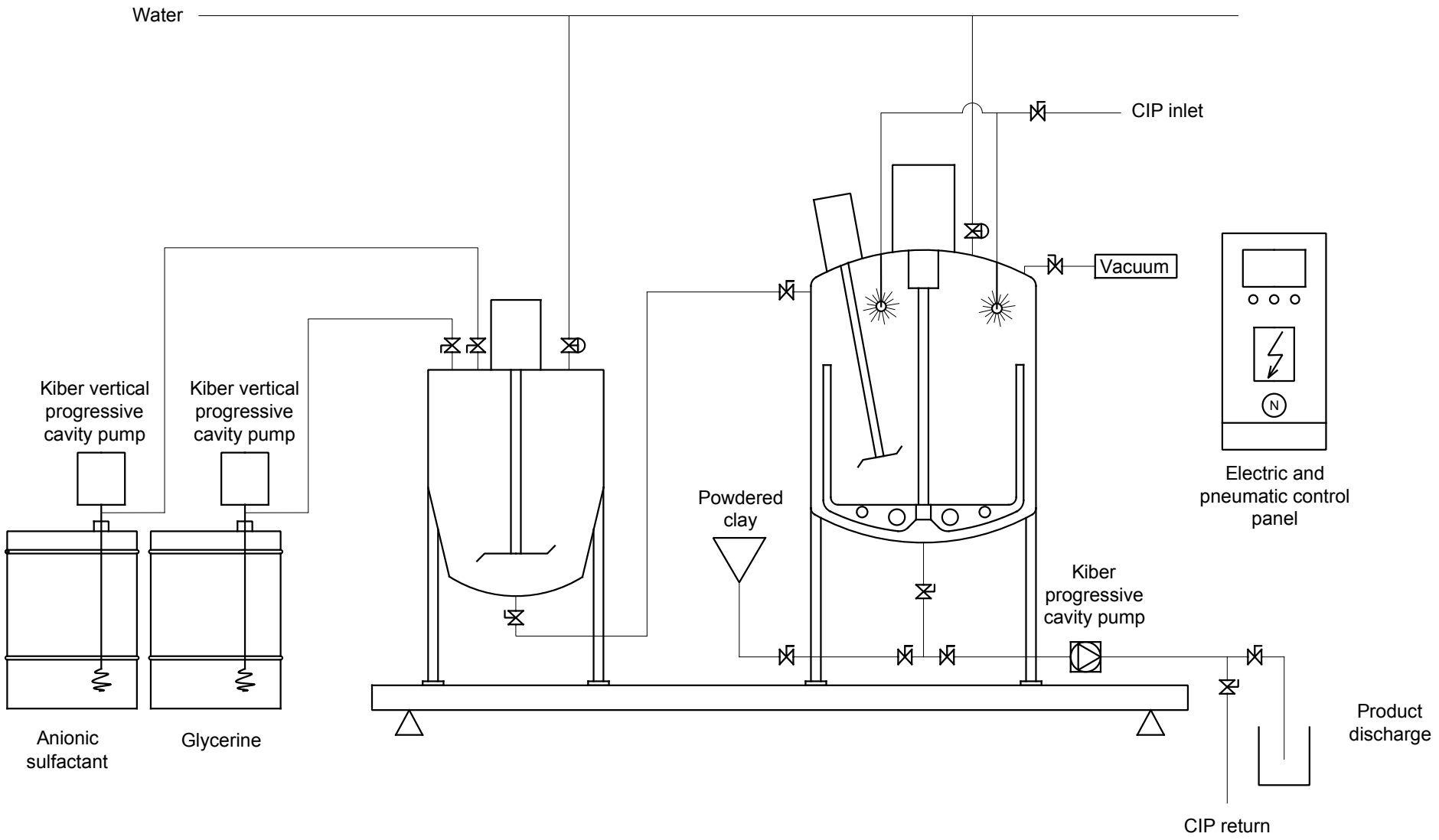
I Skid cleaning

The cleaning procedure for the MIX-4 skid involves an initial rinse of the two systems, followed by washing with warm water and the appropriate detergent. The final step consists of a rinse with clean warm water. This process can be performed in three different ways, depending on the customer's requirements.

1. A CIP cleaning system is an automatic washing system that does not require disassembly. This allows quick and effective cleaning of all the skid's components. In this case, a separate main CIP unit is required.

2. A manual CIP system consisting of a tank containing water or water with detergent and a pump for recirculating the contents of the tank through the skid. The tank must be filled or emptied manually according to the cleaning cycle.

3. Cleaning by means of a pressure lance and pressure pump. This process is completely manual.



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