

# Improving Quality of Coating processes through use of Cooled Mirror Hygrometers

## Application Background

Many tablets today are coated after being pressed. Modern tablet coatings are polymer and polysaccharide based. Tablet coatings must be stable and strong enough to survive the handling of the tablet. It is necessary for the tablets to have a smooth finish in order to make them easier to swallow. The selection of the coating is also important, as different drugs work better when absorbed into different parts of the digestive system.

Coatings are also particularly important in the confectionery industry, where sugar or vegetable oil based coatings are applied to sweet products to create layering or seal in soft centers.



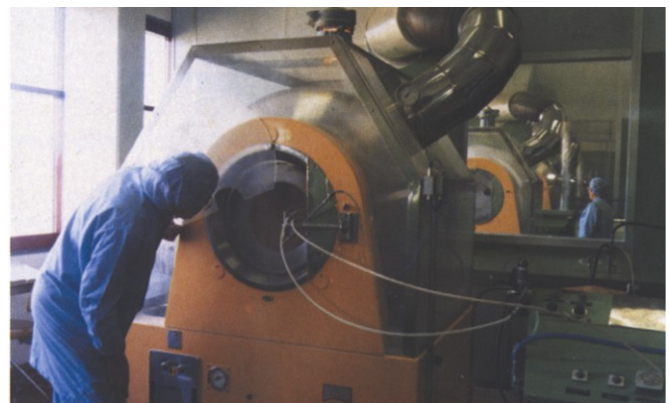
Coated Aspirin Tablets

## Measurement Technique

Tablet coating takes place inside a perforated rotating drum. Angled baffles fitted into the drum and the air flow inside the drum provide means of mixing the tablet bed. As a result, the tablets are lifted and turned from the sides into the centre of the drum, ensuring that each tablet surface receives an even amount of deposited/sprayed coating. The atmosphere in the drum and the inlet air needs to be controlled for temperature and dew point to ensure that the coatings are smooth and uniform in appearance.

The liquid spray coating is then dried onto the tablets by heated air drawn through the tablet bed from a fan. The air flow is regulated for temperature, humidity and volume to provide controlled drying and extracting rates. It is advisable to monitor both the flow of air before and after the process to get a true indication of the moisture differential. This means that drying time, and therefore costs, can be kept to a minimum.

The Michell Optidew is the most suitable instrument for the measurement situation in this application, as it is resistant to both drift and the airborne contaminants in the inlet and outlet flows.



Tablet Pan Coater

## Reference Users

Boots Pharmaceuticals, Dandy Stimerol Chewing Gum, Glaxo SmithKline, Nestlé, Rowntree Macintosh, Trebor Bassett



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