

RECP Best Practices Catalogue

Powder Products Filling Optimisation

Developed within the framework of MED TEST II



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

INCLUSIVE AND SUSTAINABLE INDUSTRIAL DEVELOPMENT



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The SwitchMed Programme is
funded by the European Union



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Best Practice - Powder Products Filling Optimisation

SECTOR:	Chemical and Pharmaceutical
Branch:	Manufacture of basic pharmaceutical products
CATEGORY	Process control or modification
APPLICABILITY	Process

COMPANY SIZE	500
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Description of the Problem (Base Scenario):

The industrial production of a product achieved an overall yield of 97.5% in 2015. Two batches of that product were produced in 2016. During industrial production, a 1.6 kg loss was recorded at the beginning of the tuning campaign. For this product, the filling led to non-compliances for bags. This non-compliance may have been due to problems with the adjustments made on the filling screw. The bags content consist of a simple mixture without granulation. This powder mixture contains 50% of an active ingredient of natural origin. The time required for the product to flow completely into the 1g bags has been mentioned as a possible cause for the existence of powder on the seals of the bags (filling followed by sealing). A possible and proposed improvement for 1g bags is synchronising the machine (flow and filling) (currently: 84 bags/min).

Description of the Solution

- Analysis of the quality control process of the bags,
- Adjustment of the dosing and sealing system,
- If the losses continue, it is necessary to purchase 2 sets of feed screws and a sealing station.

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Economic Gains	€ 500 (savings of 1.6 kg of raw material per 50 kg batch)
Environmental Gains	3.2% less raw materials needed Diminished pollutant load for solid waste.
Health and Safety Impact	Reduced amount of hazardous pharmaceutical waste.

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Capital Investments & Financial Indicators	No Investment Time for Return on Investment: Immediate
Supplier Information	-
Other Aspects	-
Implementation	Measure carried out internally by the company: Adjustment of the dosing and sealing system and improvement of the quality control of the powder bags.