

Our experts advise and train on how to address manufacturing problems and regulatory concerns in the field of Good Manufacturing Practices (GMP). They support the formulation and production of new pharmaceutical, herbal, personal care and cosmetic products. Expertise also includes home and industrial care (e.g. detergents) as well as engineering new manufacturing plants.

### **Personal Care**

The Dutch chemical consortium competes internationally on a global scale, spending each year more than € 1 billion on research and development. Innovation in areas such as biotechnology, pharmaceuticals, nutrition and food sciences, coatings and high performance materials, is among the Netherlands' top priorities and of paramount importance.

PUM experts with backgrounds in chemical sciences, technologies and production stand ready to support you in the following fields:

- Human and veterinary medicines
- Herbal extracts
- Fermentation products
- Crop protection products
- Disinfectants
- Cosmetic products
- Personal care products
- Soaps and detergents
- Industrial and domestic cleaners

### Areas of expertise

### Formulation of development, production and packaging

Based upon local requirements and market demand, and in keeping with international standards, new products can be designed and existing products critically evaluated and optimised with respect to price and performance. Validation of production processes may also be addressed.

### Quality assurance, laboratory operations, certification

In this sort of industry, it is important to build quality into your products. GMP (Good Manufacturing Practices) and GLP (Good Laboratory Practice) are key factors in achieving this objective. Our experts have ample experience in these fields. Assistance in development and validation of laboratory analysis, like HPLC (High Performance Liquid Chromatography), can be provided.

### Equipment installation, operation and maintenance

Equipment design, installation, operation, and performance qualification (DQ, IQ, OQ, PQ), can be reviewed, including heating, ventilation and air conditioning (HVAC) installations. Facilities for water of various qualities, steam, vacuum, and compressed air, can also be evaluated.

#### Plant management

Experienced managers can assist when a company's growth gives rise to complicated issues involving, for instance, the rescaling of managerial and human resources requirements.

### Product marketing and branding

Marketing and sales are areas of expertise requiring a lot of training together with specific nuanced talents. Our experts possess the know-how to assist management and train field workers.



### Mercy Acquaye Owusu-Asante

Head Technical Support FDA



"We highly value the collaboration with PUM, which has led to significant progress in terms of GMP compliance for the pharmaceutical sector. It also strengthens our strong reputation across the West African region. We are looking forward to continuing our collaboration with PUM, also to reinforce other sectors."

### **Client examples**

## Pharmaceutical supplier qualifies for Western market

A company manufacturing active ingredients for the pharmaceutical industry was supported on their GMP status, process performance of major products, and a tailor made Master Production Scheduling (MPS) was developed. Also, the staff was trained about expectations of Europe/ USA based customers to get qualified as a supplier. After two expert visits, they visited a company in The Netherlands to learn about logistics, and day to day communication with operators. Recently, the company was qualified by a western customer.

# Pharmaceutical companies join in anonymised performance assessments

Eighteen company members of a pharmaceutical branch organisation each got a one-day visit from two PUM experts. Each company received a short personal report with an evaluation of its installations, processes, analytical services, and documentation. All results were anonymised and presented at a meeting attended by all the managers of the various participating companies. As a result, individual companies are applying for assistance in specific areas of production and marketing.

# Women's cooperative makes simple cosmetic products

A women's cooperative received PUM training on how to make simple cosmetic products, partly comprised of local ingredients. Together, via their branch organisation, a number of representatives from these organisations received intensive follow-up training, which included practical experiments.

# Profit margin increase for pharmaceutical herbal products

A pharmaceutical company was manufacturing herbal powder in hard gelatine capsules. Our PUM expert advised on improving the herbal recipe and on streamlining the production process. It was estimated that by implementing these two suggestions, turnover could be increased by ten to twenty percent, thus dramatically increasing the company's profitability.

# Pharmaceutical company goes from extending old premises to brand new factory

A pharmaceutical company which had been gradually extending its old premises put in a request for PUMs assistance in assessing the situation and advice on how best to move forward. PUM experts collaborated on a couple of projects during which the company's director was invited to visit the Netherlands to see first- hand how some Dutch pharmaceutical companies had successfully tackled similar challenges. Upon his return home, the director finally became convinced that the only sensible course of action was to build a completely new factory. Now, just six years after the first PUM project, the new factory is in full operation.

#### Professional people for positive impact

PUM collaborates with businesses and organisations to grow sustainably and build a brighter future for their community. Check PUM.nl for more information and criteria, and apply for advice.