



## Company presentation

REALCO, founded in 1968, is a SME company located in the scientific park of Louvain-La-Neuve (Belgium). The company was involved in traditional products commercialization (detergents, disinfectant and descaling agent) for ten years before it developed its activity in biotechnologies applied to water treatment and cleaning. REALCO is now expert in developing process and manufacturing products based on enzymes or enzymes/bacterias complex (EBC).

### **Industrial Cleaning**

REALCO research on enzymes allowed to optimize their use in industrial cleaning (surfaces, CIP,...) and to get involved in a leading field like ultrafiltration membrane cleaning. REALCO propose responsible products, which meet the specific needs of professionals in maintenance. These products allow to obtain a better hygiene by an in-depth cleaning that reduces possibilities of microorganisms development. They also act on biofilm removal, without being aggressive for the surface.

These products are recommended for their cleaning performances, their safety for the operator and their non-aggressiveness for the machinery and tools. They also have a positive - and patented - impact on the environment.

### **Organic effluent treatment**

The first research field was biological water treatment. Different research projects, proper to REALCO or in partnership with universities (departments of biological engineering, Microbial pathology and microbiology from the Université Catholique de Louvain-La-Neuve (UCL) and department of biochemical industries from the Université Libre de Bruxelles (ULB) allowed to develop a high performance product range that fulfill requirements of private users, institutional or food industries. REALCO propose now products and/or services in septic tank or fat trap treatment and a fat treatment integrated in municipal or industrial wastewater treatment plan (WWTP). A new concept has also raised: it's considering cleaning as an integrated part of wastewater treatment thanks to the use of enzymes. These studies have shown that the main effect of introducing enzymes in cleaning or in treatment prior to the WWTP is to make soluble insoluble organic matters from wastewater. The most spectacular consequence of this phenomenon that has been patented by REALCO is the removal of the inhibitory effect of surfactants on bacterial growth (Ledent and al, 1997).

Based on the same technology REALCO has now enlarged its activities to other effluent treatment application like Biogas production (green energy) or rearing effluent treatment.

### **Responsible choice**

REALCO makes the choice to manufacture and commercialize responsible products. In that sense, all bacteria used in any product are antibiotic sensitive bacteria. REALCO shows that is not necessary to use resistant bacteria to improve the yield of water treatment. The use of sensitive bacteria, i.e. bacteria which have no resistance to antibiotics usually used in clinical medicine, presents the advantages of activating the biological epuration and, on the other hand, to respect the public health (patented by REALCO, Ledent et al., 2001).

### **R&D**

REALCO also wants to stay at the top level of its activity domain, i.e. developing and manufacturing enzymatic and EBC based products, and explore other fields in this domain. Research department is thus active with internal projects or new partnership with universities. These researches allowed the company to depose 7 patents and obtain important Innovation Awards.

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REALCO presents itself as a biotechnology specialist implicated in cleaning, hygiene and water treatment, offering a wide range of products that fulfil requirements of private users, institutional and industries.

## Training

### Training work plan

The training work is mainly based on a laboratory work. Trainee will be integrated in the R&D team.

- **Quality control:**
  - Quality control for our manufacturing plant (product analyses)
  - Stability tests of enzymatic products
  - efficacy tests of products
- **Research & Development:**
  - Stability and efficacy studies
  - Biodegradability studies of products
  - Technical support in some of R&D programs in the field of wastewater treatment and industrial cleaning (including hygiene and microbiology).
  - Writing of reports.

### Accommodation

Accommodation is organised and offered by REALCO: a room in a student house (4 rooms) in Louvain-La-Neuve, close to the city centre and our offices (Value: 375€/month).

### Candidate profile

The candidate should ideally have knowledge in chemistry or biology/microbiology or wastewater treatment and have an interest in laboratory work.

Education level: bachelor, graduate, licenciante or bioengineer (or equivalent)

Language: French (B1-B2)

Start date of the training: 02/01/2015 (flexible)

Training duration: 4 to 6 months

### REALCO

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