

INNOVATION for your PURIFICATION NEEDS



**PARTUS**  
TECHNOLOGIES

cost reduction  
purity high yields  
ease of use excellent productivity  
large scope



### Centrifugal Partition Chromatography

Centrifugal Partition Chromatography (CPC)  
has finally become industrialized after decades  
of successful laboratory development.

## Our technology for your products

CPC offers significant improvements for the industrial production of **Active Pharmaceutical Ingredients (APIs)** and **New Chemical Entities (NCEs)** as compared to the well known High Performance Liquid Chromatography (HPLC) production.

- **Drastic cost reduction** due to the absence of a solid support and reduced solvent consumption (up to 10 times)
- **High yields (≈90 %)** even for very polar or large molecules susceptible to irreversible adsorption or degradation on filled columns
- **Excellent productivity** which can be further improved when using the displacement mode
- **Purity** requirements set by world-wide regulatory agencies can be obtained even with mixtures of closely related analogs
- **Ease of use and scalability**
- **Large scope** allowing purification of almost any type of compound from ions to large proteins

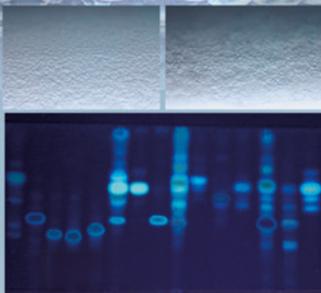
The **PARTUS Technologies** staff has more than 10 years of experience in the purification of high value-added molecules for which CPC has proven to be tailor-made.

**PARTUS Technologies** has developed the first industrial CPC equipment compliant with pharmaceutical requirements, and provides customers with **complete service from process engineering to production start off**.

## Competence & Compliance



A facility upgraded to cGMP KiloLab standards makes **PARTUS Technologies** a perfect partner for pharmaceutical and fine chemical companies, allowing them to accelerate and improve the discovery and commercialization of their molecules.



#### Applications : natural products and synthetics

Alkaloids  
Antibodies  
Antibiotics  
Carotenoids  
Dyes  
Lipids  
Organic acids  
Peptides  
Polyphenols  
Proteins  
Saponins...

## About CPC Technology

CPC uses a **biphasic solvent system**. One of the phases is chosen as stationary and is maintained inside the partition cells of the rotor by a centrifugal force field. The mobile phase is then pumped through and dispersed in the stationary one. Upon injection of a crude sample, the different solutes travel inside the rotor at unequal velocities according to their partition coefficients.

This process differs from HPLC in four important ways :

- ➔ **Higher selectivity** can be achieved by a skilled design of the solvent system
- ➔ **Higher capacity and lower solvent consumption** are due to the greater proportion of stationary phase volume in the CPC rotor
- ➔ Either an **elution** or a **displacement mode** can be applied with the same apparatus depending on the chemical properties of the targeted compound
- ➔ **Normal and reversed phase** separations can be alternately performed in the same run



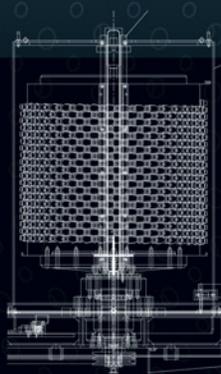
## Partitron 25

The first truly industrial centrifugal partition chromatograph

why?

- The highest volume available on the market (25 liters) in a compact apparatus (150 x 100 x 185 cm LxWxH; 1200 kg), making Partitron 25 exceptionally valuable for the large scale purification of APIs and NCEs with a processing capability up to 1 kg/run (*capacity up to 40 liters upon request*)
- An individual accessibility of the partition cells allowing easy cleaning validation
- No risk of contamination between sealed cells due to the one-piece patented configuration of the rotor (WO 2004/079363 - US 2004-0173534-A1)
- Titanium chosen for its toughness, lightness, chemical inertness and biocompatibility
- Pressure limit (>> 100 bars) allowing industrial flow-rates for high productivities and use of supercritical fluids
- Optional metal seals permitting steam sterilization
- Secure instrument with an explosion proof configuration





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