



## **CYCLOLAB**

Cyclodextrin Research & Development Laboratory Ltd.  
Mail address: Budapest, P.O.Box 435, H-1525 Hungary  
Location: Illatos út 7., Budapest, H-1097 Hungary  
TEL: (361) 347-60-60 or -70, FAX: (361) 347-60-68  
E-mail: [cyclolab@cyclolab.hu](mailto:cyclolab@cyclolab.hu)  
Homepage: [www.cyclolab.hu](http://www.cyclolab.hu)  
VAT No.: HU 10678970



## **Analytical services at CycloLab Ltd.**

CycloLab has been engaged with cyclodextrins for over 40 years and during this time we have collected a lot of experience in cyclodextrin analysis. The CycloLab analytical testing laboratories offer a diverse range of analytical techniques and hundreds of different tests. CycloLab helps clients solve quality issues, support research projects, trouble-shoot, mitigate risk and much more. The laboratories test a wide range of chemicals and materials, working with clients on a global basis.

### **Our analytical portfolio**

#### **1. Liquid Chromatography:**

Determination of impurities, purity, identification, assay in cyclodextrin samples  
Qualitative and quantitative determination of material (cyclodextrin or API) in formulations  
Forced degradation (stress) studies  
Analysis of Sugammadex samples

#### **2. Gas Chromatography:**

Determination of volatile organic components, residual solvents, volatile active ingredient content in cyclodextrin complexes

#### **3. Capillary electrophoresis:**

Determination of interaction strength between API and cyclodextrins, residual ionic compounds, average degree of substitutions of charged cyclodextrins, chiral separations

#### **4. Spectroscopic analysis (NMR – 1D and 2D, infrared spectroscopy, mass spectroscopy – LC-MS, MALDI, ESI, fluorescence spectroscopy):**

Structure identification, determination of impurities, determination of interaction strength between API and cyclodextrins, assessment of stoichiometry and complex structure

#### **5. ICH stability testing**

#### **6. Elemental impurities by ICP-MS**

#### **7. Microbial testing:**

TAMC, TYMC, bacterial endotoxins, E. coli, Salmonella, Pseudomonas A., Staphylococcus A, etc.



## **CYCLOLAB**

Cyclodextrin Research & Development Laboratory Ltd.  
Mail address: Budapest, P.O.Box 435, H-1525 Hungary  
Location: Illatos út 7., Budapest, H-1097 Hungary  
TEL: (361) 347-60-60 or -70, FAX: (361) 347-60-68  
E-mail: [cyclolab@cyclolab.hu](mailto:cyclolab@cyclolab.hu)  
Homepage: [www.cyclolab.hu](http://www.cyclolab.hu)  
VAT No.: HU 10678970



### **8. Colloid characterization:**

Dynamic light scattering, zeta potential, particle size distribution analysis (by photon correlation spectroscopy / dynamic light scattering)

### **9. Polymer characterization:**

Average molecular weight, static light scattering, mean globule diameter

### **10. Isothermal titration calorimetry: determination of interaction strength and complex stoichiometry**

### **11. Powder analysis:**

Differential scanning calorimetry, X-Ray Powder Diffraction, Scanning electron microscopy, Transmission electron microscopy, Laser diffraction analysis, Raman mapping, Scanning Electronmicroscopy with X-ray Microanalysis, tapped density, bulk density

### **12. Bioequivalence studies:**

Membrane permeation, protein binding, dissolution and dilution studies for formulation samples

### **13. Surface tension measurement, viscosity determination, refractive index for solution**

### **14. Circular dichroism**

### **15. Classical analytical measurements:**

pH, osmolality, wet chemistry, conductometry, UV/VIS

### **16. Water content determination:**

Karl-Fischer titration and loss on drying,

### **17. In silico analysis:**

Molecular modeling studies to assess binding strength and complex structure