



## Laboratory of Aggregates

- I. Location of the laboratory:

Research, Education and Innovation Centre of Earth and Environmental Science  
University of Miskolc building C/2 hall 1
- II. Operating institute of the laboratory:

Institute of Raw Material Preparation and Environmental Technology
- III. Scientific head of the laboratory:

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- IV. Responsible researcher/person:

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- V. The aims and tasks of the laboratory on the education, scientific and research fields:

Analysis of aggregates regarding their physical properties. Qualification of aggregates for road and building construction in accordance with legal conditions.  
Standard analysis of aggregates.  
Analysis of aggregate quality regarding its mineral processing technology, design and proposal for technology development in order to improve product quality.  
Tasks of education and research:  
Laboratory classes for students in both B.Sc. and M.Sc. level.  
Laboratory training for postgraduate courses.  
Laboratory background for PhD students.  
Laboratory background for domestic and international R&D programmes.
- VI. Laboratory experiments, services (on-site experiment is possible):
  - Analysis of geometry of aggregates (particle size distribution, particle shape and density).
  - Analysis of physical properties of aggregates (mDeval, Los-Angeles, MgSO<sub>4</sub> crystallization, resistance of freeze and thermal shock).
  - Aggregates for concrete, asphalt and railway.
  - Demonstration and laboratory classes for further education of practising engineers.



## Laboratory of Aggregates

- VII. Available equipment for education, research and innovation
- Standard test sieve series
  - Sample splitters, sample reducers
  - Sample containers (chrome and stainless steel)
  - Drying cabinets
  - Stainless metal pycnometer 0.5 liter; 3 liter volume
  - microDeval equipment according to EN 1097-1 standard
  - Deval drums according to the old MSZ standard
  - Los Angeles equipment (according to EN 1097-2 standard)
  - Freezing equipment
  - Programmable furnace
  - Particle shape testing equipment according to EN 933-3 standard
  - Mixing device and burette for carrying out Methylene blue tests
  - Laboratory glassware (measuring cylinders, pycnometers)
  - Scales with different measurement limits and accuracy
  - Climate chamber
  - Laboratory sieves and sieving equipment with 200 mm and 400 mm diameter sieves
- VIII. Main professional partners / references:  
Köka Ltd.; Colas Északkő Ltd.; Bazalt Kőbányák Ltd.; HE-DO Ltd.; Semmelrock Ltd.;  
Zempléncő Ltd., Hungarian Public Roads Nonprofit ZRt.
- IX. Compiler of the information material:  
Ádám Rác



Photos



Laboratory



mDeval drum



Freezer

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