



## Modular Adiabatic Reaction Calorimeter

At this year's analytica, NETZSCH-Gerätebau demonstrated the MMC 274 Nexus, which is used for measuring heats of reaction, reaction rates, endotherms, heat capacities, phase changes, gas generation rates and vapour pressure. Flexibility and manifold measurement possibilities allow the MMC 274 Nexus to be used in countless application fields; for process development in the chemical and pharmaceutical industry, as well as for investigation of the storage and transport behaviour of chemicals, to name a few. As a compact tabletop unit, the newly developed MMC 274 Nexus

closes the gap between large adiabatic reaction calorimeters and small differential scanning calorimeters. This instrument allows for the analysis of relatively large sample volumes consisting of several millilitres. Changes in pressure resulting from the reaction are recorded. Furthermore, in addition to purely adiabatic or purely isothermal measurements, the investigations can be carried out in Scanning mode. Properties such as heat capacities can therefore be quickly and precisely analysed. Also, exothermic and endothermic effects can be quantitatively characterised. The MMC 274 Nexus consists of a base unit with integrated electronics, a software package, and various easy-to-exchange measurement modules. These exchangeable modules make it quick and easy to optimally adjust the system to the measurement requirements. The MMC 274 Nexus can be operated in a great variety of modes (adiabatic, constant heating rate, constant power input, isothermal) or in the Heat-Wait-Search mode. Furthermore, it is faster and easier to operate than conventional adiabatic reaction calorimeters, while providing considerably higher sensitivity in many areas.

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