

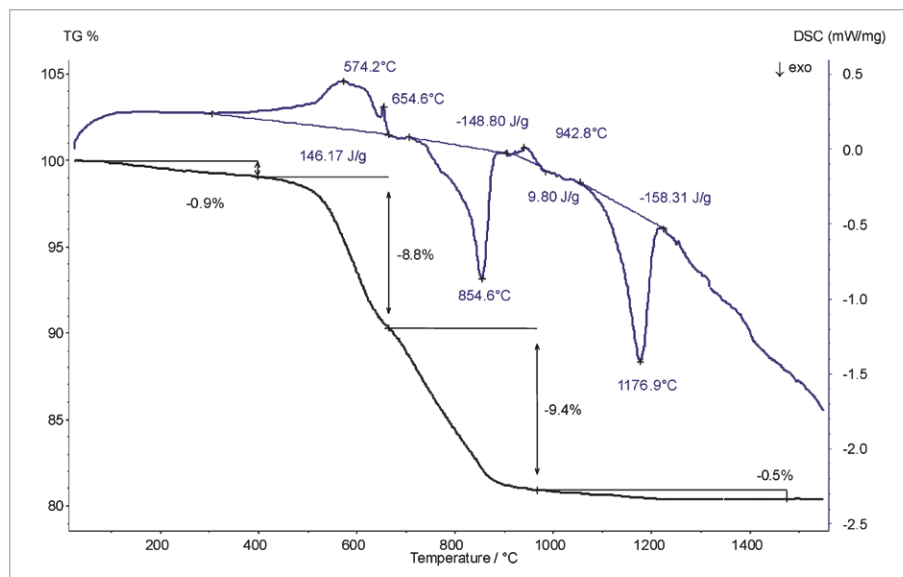
APPLICATION SHEET

INORGANICS – PHARMACEUTICALS

ALUMINUMCHLOROHYDRATE $\text{Al}_2\text{Cl}(\text{OH})_5$

Aluminum chlorohydrate is a group of salts with the general formula $\text{Al}_n\text{Cl}_{(3n-m)}(\text{OH})_m$. It is used in deodorants and antiperspirants and as a flocculent in water puri-

fication. The modification most commonly used in deodorants and antiperspirants is $\text{Al}_2\text{Cl}(\text{OH})_5$.



Instrument

STA 449 C Jupiter®

Test Conditions

Temperature range	RT... 1550°C
Heating/cooling rates	20 K/min
Atmosphere	He/O ₂ (80:20) at 50 ml/min
Sample mass	22 mg
Crucible	Pt-Rh
Sensor	TG-DSC type S

Results

The material was first heated to 550°C at 10 K/min to remove surface water and HCl. After cooling and reweighing, it was heated from RT to 1550°C. As can be seen, several mass loss steps were detected. Endothermic DSC effects occur due to evaporation of gaseous products. But also two strong exothermic DSC peaks were detected which might be due to solid-state reactions or oxidation of the evolved gases.