

# APPLICATION SHEET

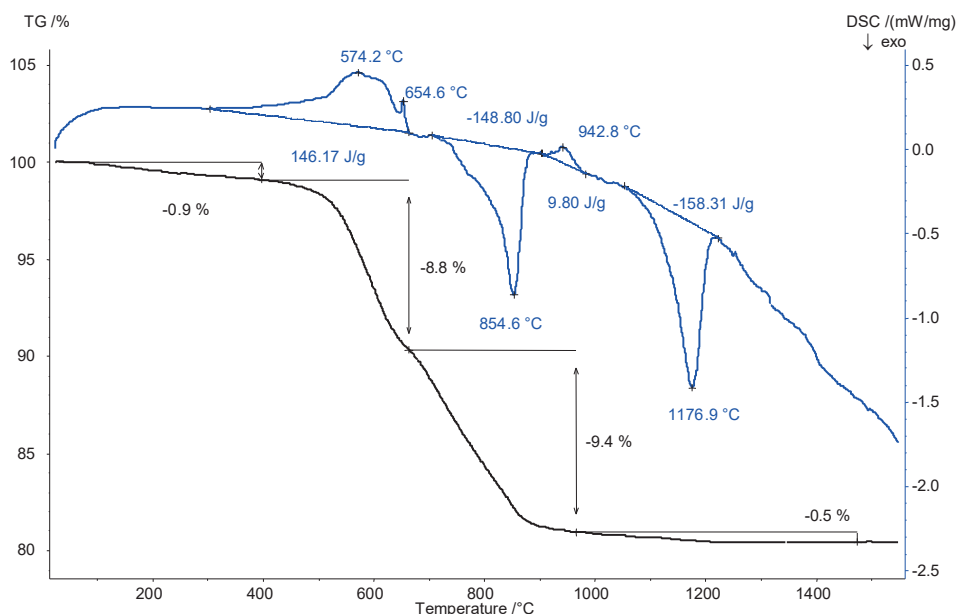
Inorganics · Pharmaceuticals  
STA 449 **F1 Jupiter**®

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

### Introduction

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

and antiperspirants and as a flocculent in water purification. The modification most commonly used in deodorants and antiperspirants is  $\text{Al}_2\text{Cl}(\text{OH})_5$ .



### Test Conditions

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

### Test 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 the 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.