

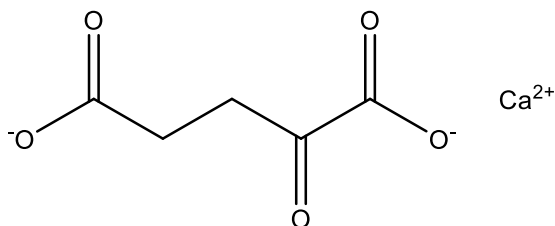


## Test Report

**Sample name:** Calcium Alpha-Ketoglutarate  
**Client:** Hansen Sp. z o.o., ul. Zaborowska 8, 05-083 Zaborów, Poland  
**Purpose of test:** Verification of delivered product  
**Sample description:** Calcium Alpha-Ketoglutarate  
**Brand name:** Hansen Supplements

### Description of substance:

**Sample size:** 10g  
**Property:** White powder  
**Formula:** C<sub>5</sub>H<sub>4</sub>CaO<sub>5</sub>•H<sub>2</sub>O (as hydrated form)  
**CAS number:** 71686-01-6  
**Structure:**



**Batch No.:** -  
**Date received:** 07.04.2021  
**Test items:** Identification of substance, purity, heavy metals  
**Summary:** The sample has been identified and found to be of high quality  
**Measured purity:** **Above 98%** according to <sup>1</sup>H NMR analysis. Appropriate spectra are shown in (Fig. 2).  
**Authentication method:** Standard and literature (<https://www.chemicalbook.com/>) α-Ketoglutarate shifts.

### All values are within the relevant standards

#### Test results:

##### Purity:

Heavy metals: n.d.



KATEDRA CHEMII  
Pb (Lead): n.d.

Hg (Mercury): n.d.

Cd (Cadmium): n.d.

As (Arsen): n.d.

**Comments:**

n.d. – not detected, below limit of detection on AAS spectr AA240FS + AA240Z + GTA120

**Date:** 07.04.2021

**Tested by:** Antoni Szumny

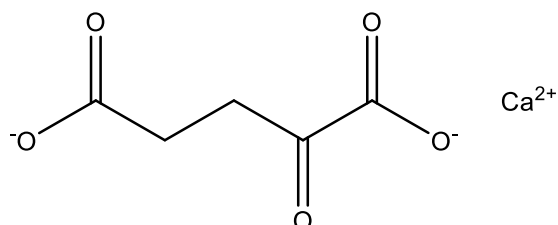


Figure 1. Chemical structure of /)  $\alpha$ -Ketoglutarate

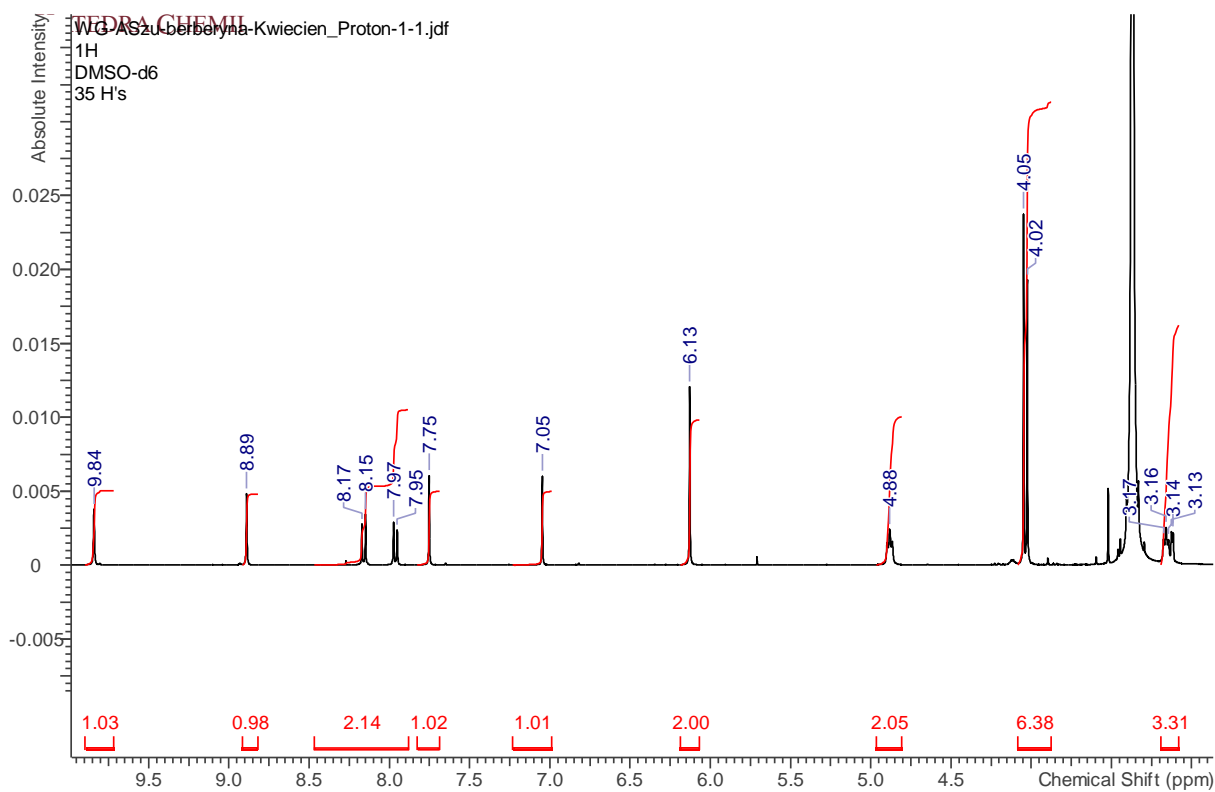


Figure 2.  $^1\text{H}$  spectrum of berberine (in DMSO);

07.04.2021 Antoni Szumny

