WROCŁAW UNIVERSITY OF ENVIRONMENTAL AND LIFE SCIENCES
DEPARTMENT OF FOOD CHEMISTRY AND BIOCATALYSIS

Test Report

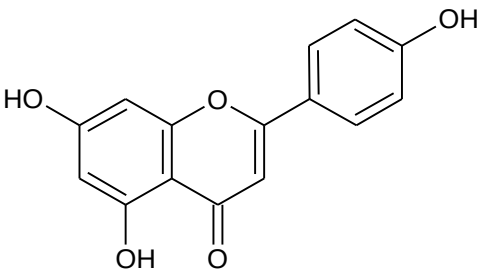
Sample name: **Apigenin**

Client: Hansen Sp. z o.o., ul. Zaborowska 8, 05-083 Zaborów, Poland

Purpose of test: Verification of delivered product
Sample description: "Pure apigenin"
Brand name: Hansen Supplements

Description of substance:

Sample size: 10g
Property: pale-yellow powder
Forumla: $C_{15}H_{10}O_5$
CAS number: 520-36-5
Structure:



Batch No.: 030771230614
Date received: 20.06.2024
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 ^{1}H NMR analysis. Appropriate spectra are shown in (Fig. 2).
Authentication method: Standard and literature Victor, M.M., David, J.M., Sakukuma, M.C., França, E.L. and Nunes, A.V., 2018. A simple and efficient process for the extraction of naringin from grapefruit peel waste. *Green Processing and Synthesis*, *7*(6), pp.524-529. ^{1}H and ^{13}C shifts.

All values are within the relevant standards

Test results:
Purity:

Heavy metals: n.d.
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: 29.06.2024

Tested by: Antoni Szumny

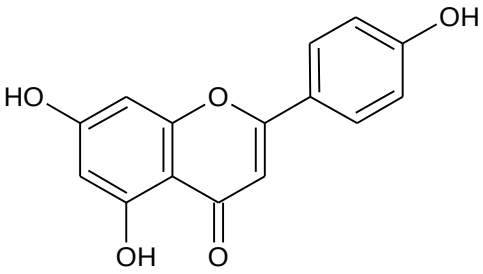


Figure 1. Chemical structure of apigenin

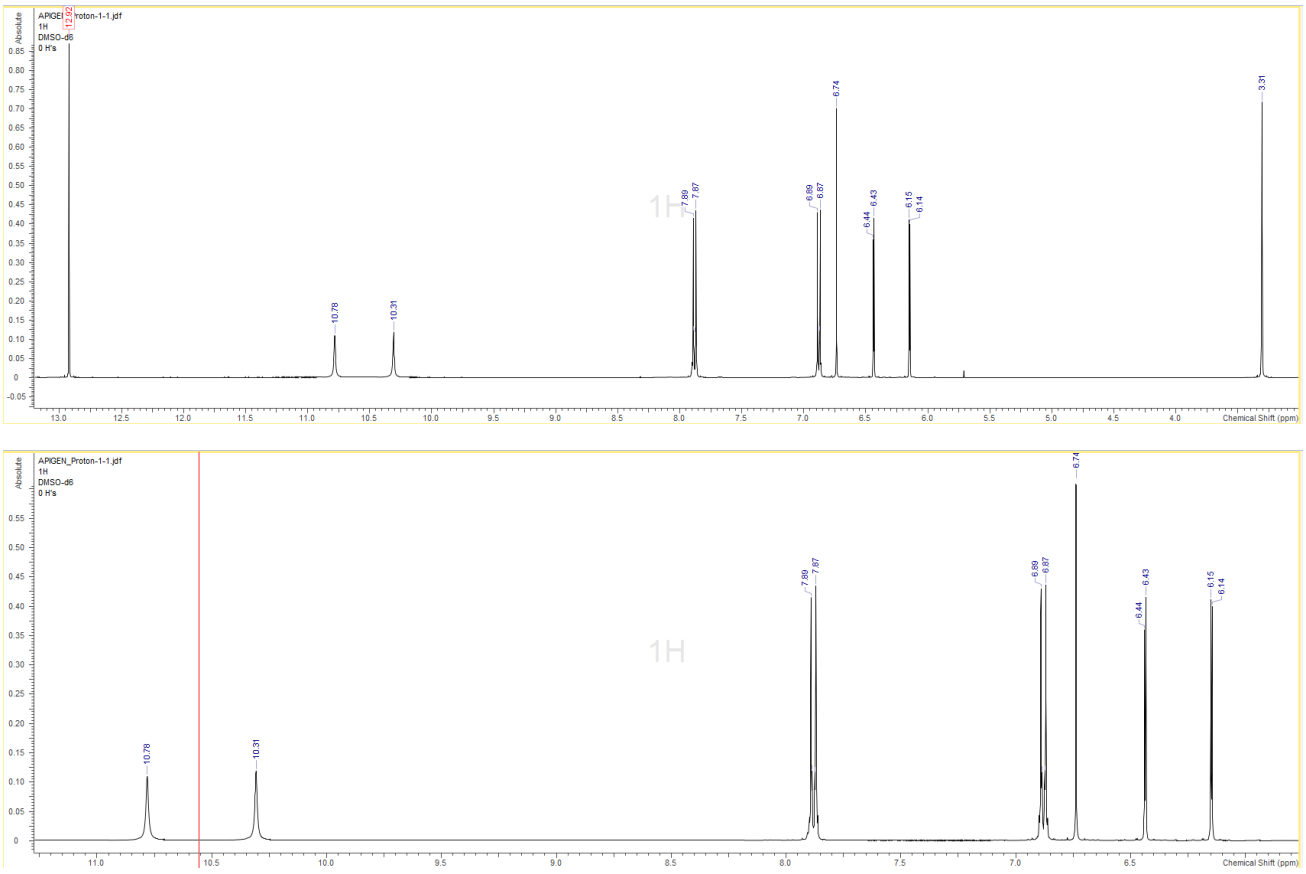


Figure 2. ^{1}H spectrum of apigenin batch 030771230614 (in DMSO);

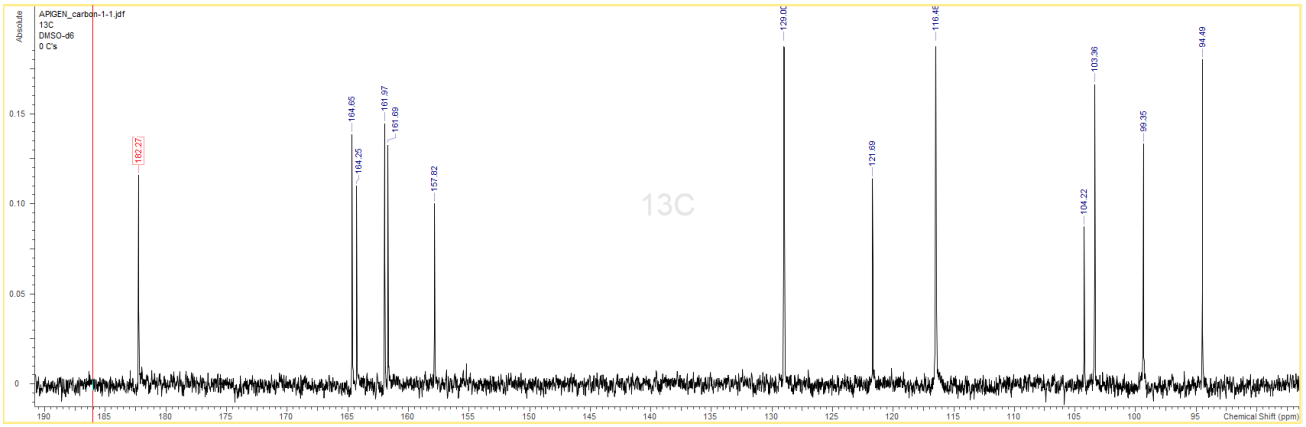


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Figure 2b. ^{13}C of apigenin spectrum batch 030771230614 (in DMSO);

29.06.2024 prof. dr hab. Antoni Szumny