

## Certificate of Analysis

**Product Name:** Diflufenican  
PESTANAL™, analytical standard

**Product Number:** 45751

**Batch Number:** BCCG3122

**CAS Number:** 83164-33-4

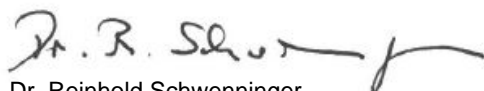
**Formula:** C<sub>19</sub>H<sub>11</sub>F<sub>5</sub>N<sub>2</sub>O<sub>2</sub>

**Formula Weight:** 394.29

**Expiration Date:** JUN 2026

**Quality Release Date:** 15 SEP 2021

TEST	SPECIFICATION	RESULT
APPEARANCE (COLOR)	WHITE TO YELLOW AND FAINT BEIGE TO BEIGE AND FAINT BROWN TO LIGHT BROWN AND YELLOW-BROWN	LIGHT BROWN
APPEARANCE (FORM)	POWDER OR CRYSTALS	POWDER
PURITY (HPLC AREA %)	≥ 95.0 %	97.0 %
MELTING POINT	157 - 164 C	160 C
WATER	≤ 1.0 %	0.4 %
PROTON NMR SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS



Dr. Reinhold Schwenninger

Quality Assurance

Buchs, Switzerland

Sigma-Aldrich warrants that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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**Thermo Scientific Vanquish UHPLC**

<b>Pump :</b> VF-P20-A <b>Autosampler:</b> VF-A10-A <b>Detector:</b> VF-D11-A <b>Column:</b> Supelco Ascentis Express C18, 2.7 $\mu$ m <b>Column Dim.:</b> 150 x 2.1 mm <b>Mobile Phase:</b> %A : ACN %B : %B %C : %C %D : H3PO4 0.01M <b>Gradient :</b> see Figure 1 <b>Sample Prep.:</b> 0.5 mg sample in 1 ml acetonitrile	<b>Injection Time:</b> 21.07.21 16:32 <b>Processed By:</b> murthale <b>Vial Number:</b> R:E8 <b>Column S/N:</b> - <b>Sample Type:</b> Unknown <b>Injection Volume:</b> 1.0 $\mu$ l <b>Flow:</b> 0.50 ml/min <b>Column Temp. (°C):</b> 35.00 <b>Run Time:</b> 15.00 min
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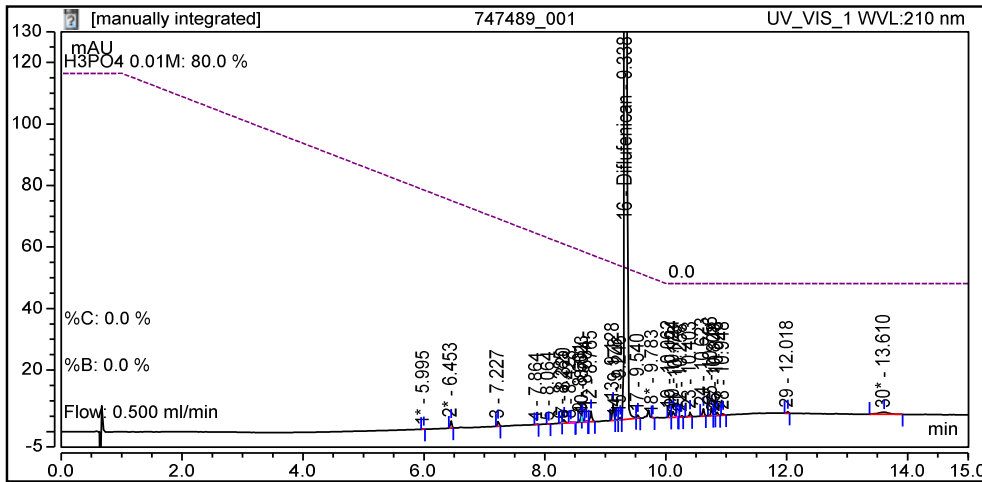


Figure 1: Zoomed Chromatogram

No.	Ret.Time min	Peak Name	Area mAU*min	Height mAU	Amount	Rel.Area %
1	5.995		0.00317	0.14516	n.a.	0.01
2	6.453		0.05388	2.30804	n.a.	0.15
3	7.227		0.03833	1.53210	n.a.	0.11
4	7.864		0.00477	0.17410	n.a.	0.01
5	8.064		0.00347	0.14099	n.a.	0.01
6	8.285		0.01091	0.33530	n.a.	0.03
7	8.320		0.05385	1.29996	n.a.	0.15
8	8.428		0.00926	0.15239	n.a.	0.03
9	8.601		0.06011	2.32926	n.a.	0.17
10	8.623		0.04328	1.56539	n.a.	0.12
11	8.684		0.01129	0.36235	n.a.	0.03
12	8.765		0.09823	3.36132	n.a.	0.27
13	9.128		0.13436	5.28879	n.a.	0.37
14	9.178		0.00688	0.23197	n.a.	0.02
15	9.246		0.02145	0.83115	n.a.	0.06
16	9.338	Diflufenican	35.19071	1339.27186	n.a.	97.02
17	9.540		0.03145	1.04284	n.a.	0.09
18	9.783		0.00221	0.11161	n.a.	0.01
19	10.062		0.04526	1.79921	n.a.	0.12
20	10.124		0.06870	1.94270	n.a.	0.19
21	10.178		0.00158	0.08443	n.a.	0.00
22	10.258		0.01838	0.76166	n.a.	0.05
23	10.403		0.04000	1.48117	n.a.	0.11
24	10.623		0.05767	2.35112	n.a.	0.16
25	10.756		0.06459	2.57634	n.a.	0.18
26	10.808		0.00425	0.17529	n.a.	0.01
27	10.848		0.02888	1.11735	n.a.	0.08
28	10.948		0.02143	0.71184	n.a.	0.06
29	12.018		0.01196	0.49537	n.a.	0.03
30	13.610		0.13123	0.66846	n.a.	0.36
			35.27189	1374.66752		100.00

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Table 1: Integration

