

Certificate of Analysis

Product Name: Tetramethrin
PESTANAL®, analytical standard

Product Number: 45681

Batch Number: BCCN9586

CAS Number: 7696-12-0

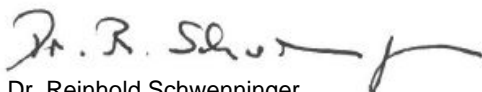
Formula: C₁₉H₂₅NO₄

Formula Weight: 331.41

Expiration Date: SEP 2030

Quality Release Date: 28 OCT 2025

TEST	SPECIFICATION	RESULT
APPEARANCE (COLOR)	WHITE TO FAINT YELLOW TO FAINT BEIGE	FAINT BEIGE
APPEARANCE (FORM)	POWDER OR CRYSTALS	POWDER
PURITY (HPLC AREA %)	≥ 75.0% TRANS-TETRAMETHRIN	90.3 %
HPLC MINOR COMPONENT (AREA %)	≤ 25.0% CIS-TETRAMETHRIN	8.0 %
MELTING POINT	74 - 81 C	75 C
WATER	≤ 1.0 %	0.3 %
PROTON NMR SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS TO STRUCTURE



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.

The vibrant M and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. Detailed information on trademarks is available via publicly accessible resources.
© 2018 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.



HPLC	
Pump : VF-P20-A	Injection Time: 24.10.25 14:59
Autosampler: VF-A10-A	Processed By: M234428
Detector: VF-D11-A	Vial Number: B:A6
Column: Supelco Ascentis Express C18, 2.7 µm	Column S/N: -
Column Dim.: 150 x 2.1 mm	Sample Type: Unknown
Mobile Phase:	Injection Volume: 1.0 µl
%A : %A	Flow: 0.40 ml/min
%B : %B	Column Temp. (°C): 40.00
%C : MeOH	Run Time: 60.00 min
%D : H3PO4 0.01 M	
Gradient : see Figure 1	
Sample Prep.: 1 mg sample in 1 mL acetonitrile	

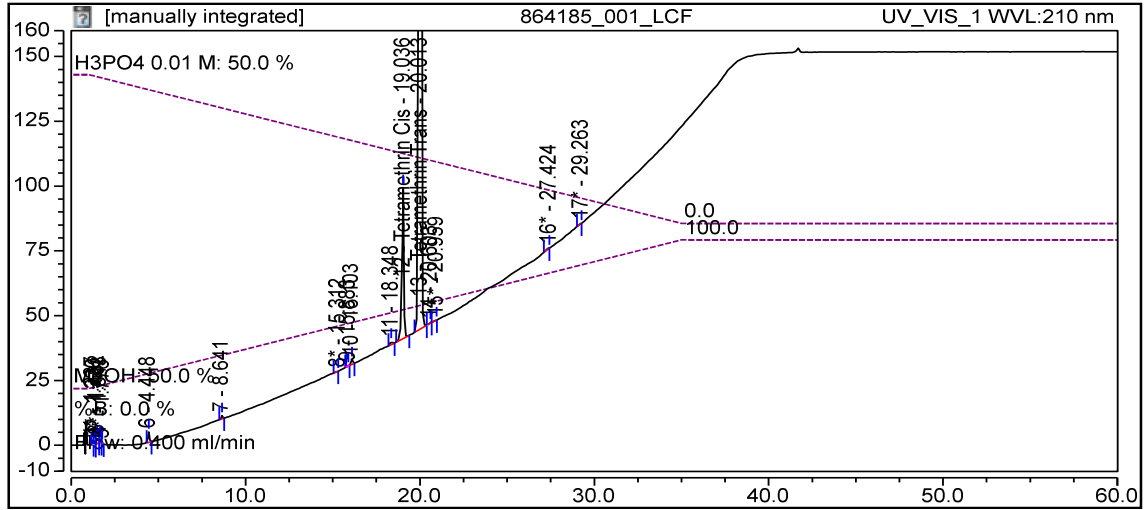


Figure 1: Zoomed Chromatogram

No.	Ret.Time min	Peak Name	Area mAU*min	Height mAU	Amount	Rel.Area %
1	1.237		0.09919	1.83565	n.a.	0.12
2	1.320		0.06534	1.28120	n.a.	0.08
3	1.482		0.13069	2.06276	n.a.	0.15
4	1.643		0.07755	1.33390	n.a.	0.09
5	1.776		0.03105	0.40194	n.a.	0.04
6	4.448		0.36428	4.04120	n.a.	0.43
7	8.641		0.13363	1.30273	n.a.	0.16
8	15.312		0.02122	0.00000	n.a.	0.02
9	15.883		0.01332	0.18101	n.a.	0.02
10	16.103		0.23008	1.84973	n.a.	0.27
11	18.348		0.18952	1.35822	n.a.	0.22
12	19.036	Tetramethrin Cis	6.79869	58.23947	n.a.	7.99
13	20.013	Tetramethrin Trans	76.77585	695.45090	n.a.	90.26
14	20.603		0.03788	0.42223	n.a.	0.04
15	20.959		0.03838	0.07248	n.a.	0.05
16	27.424		0.03934	0.00000	n.a.	0.05
17	29.263		0.01914	0.05196	n.a.	0.02
Total:			85.06514	769.88537		100.00

Table 1: Integration

The vibrant M and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. Detailed information on trademarks is available via publicly accessible resources.

© 2018 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

