

CERTIFICATE of ANALYSIS



GC-MS Heroin Adulterant Mixture

Item No.: 37356
Batch No.: 0657616

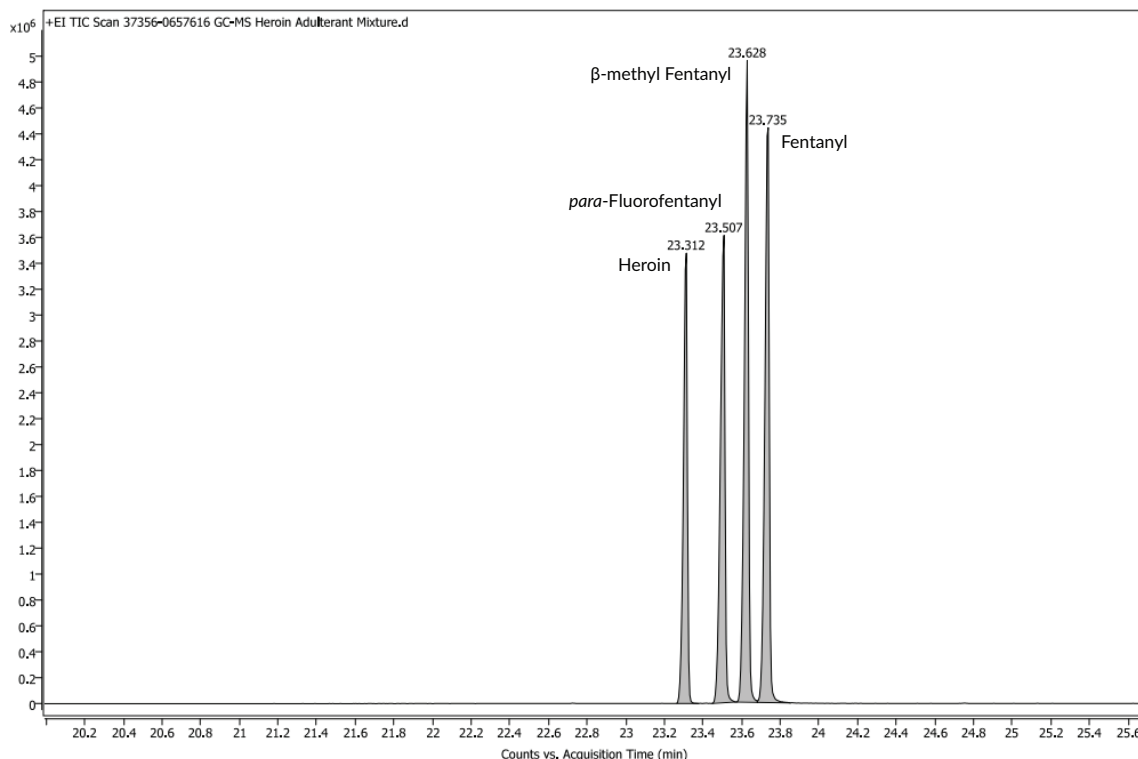
Expiry Date: 25AUG2027 (valid from date of certification)
Supplied as: Each analyte at 1 mg/ml solution (as free base) in acetonitrile; in a deactivated glass ampule

Volume per Ampule: Not less than 1 ml. Ampules are overfilled. It is advised that labs use measured volumes.

Storage & Handling: Flammable. Store upright and unopened at -20°C. Warm to room temperature prior to opening.

Quality Information

Test	Specification	Result
Analyte Presence, GC-MS	Identities confirmed	Pass



Approval:

Title: Manager, Analytical Chemistry

Certification Date: 25AUG2022

Cayman Chemical certifies that this product meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiry date when stored unopened as recommended.

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Quality Control Table

Item No.	Item Name	RT (min)	NIST Match
9001543	Heroin	23.3	Pass
15496	<i>para</i> -Fluorofentanyl (hydrochloride)	23.5	Pass
9002860	β -methyl Fentanyl (hydrochloride)	23.6	Pass
23580	Fentanyl	23.7	Pass
GC-MS Conditions			
Column: 30 m x 250 μ m x 0.25 μ m		Flow Rate: 1 ml/min	
Inlet Temperature: 250°C			
Injection Volume: 1 μ l			
Split: 20:1			
Carrier Gas: He			
Over Program: Hold 60°C for 10 min. 20°C/min. to 300°C; hold 300°C for 10 min.			

Mixture was prepared using gravimetric solution preparation procedures from neat analytical standards. The concentration of this mixture was prepared with an estimated error of $\pm 10\%$.

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Revision History

Revision No.	Date	Reason for Revision
01	31AUG2022	Initial version
02	13JUN2025	Updated expiry date

Disclaimers

Material Safety Data

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some but not all of the information required for the safe and proper use of this material. Before use, review the complete Material Safety Data Sheet, which has been sent via email to your institution.

Warranty and Limitation of Remedy

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specification.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver of Buyer of all claims hereunder with respect to said material. For further details, please refer to our Warranty and Limitations of Remedy located on our website and in our catalog.

This Certificate shall not be reproduced except in full, without written approval from the Cayman Chemical Company.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 • USA

PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640

techserv@caymanchem.com
www.caymanchem.com