



## CERTIFICATE OF ANALYSIS



Date: 16-02-2026

|                                       |   |                      |              |
|---------------------------------------|---|----------------------|--------------|
| <b>Product Name</b>                   | <b>Remifentanil EP Impurity E</b>   |                      |              |
| <b>Chemical Name</b>                  | Methyl 1-(3-methoxy-3-oxopropyl)-4-[(2-methyl-3-oxopentanoyl)(phenyl)amino]piperidine-4-carboxylate   |                      |              |
| <b>Structure</b>                      | <p>The chemical structure shows a complex molecule with a central piperidine ring. It features a phenyl group attached to one nitrogen atom and a 2-methyl-3-oxopentanoyl group attached to the same nitrogen. The other nitrogen atom is part of a 3-methoxy-3-oxopropyl side chain. There are also two carbonyl groups (C=O) and a methyl group (CH3) attached to the ring.</p> |                      |              |
| <b>Batch No.</b>                      | -   | <b>CAS No.</b>       | 2518277-19-3 |
| <b>Analysis Date</b>                  | -   | <b>Retest Date</b>   | -            |
| <b>Mol. Formula</b>                   | C <sub>23</sub> H <sub>32</sub> N <sub>2</sub> O <sub>6</sub>   | <b>Molecular Wt.</b> | 432.5        |
| <b>Long term Storage Condition</b>    | Store at 2-8 °C in well closed container  |                      |              |
| <b>Handling and Transit Condition</b> | 25-30 °C in well closed container   |                      |              |

| <b>Test</b>            | <b>Result</b>         |
|------------------------|-----------------------|
| Appearance             | -                     |
| Solubility             | -                     |
| 1H-NMR                 | Conforms to structure |
| MASS                   | Conforms to structure |
| Chromatographic Purity | >90%                  |

**Note:** This material should be used for research purpose and not for human or animal consumption. Any patent applicable for this product in any country is not applicable for this analytical standard/research chemical.

|                  | <b>Prepared By</b> | <b>Checked By</b> | <b>Approved By</b> |
|------------------|--------------------|-------------------|--------------------|
| <b>Signature</b> |                    |                   |                    |
| <b>Date</b>      |                    |                   |                    |

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