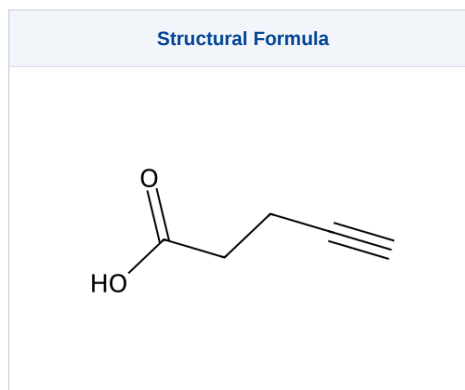


## CERTIFICATE OF ANALYSIS

Standard product specification — applicable to all consignments of this product and grade supplied by Scapex Exports Pvt. Ltd., manufacturer and supplier of quality chemicals.

|                   |                                                     |
|-------------------|-----------------------------------------------------|
| Product Name      | 4-Pentynoic acid                                    |
| C.A.S. Number     | 6089-09-4                                           |
| Molecular Formula | C <sub>5</sub> H <sub>6</sub> O <sub>2</sub>        |
| Molecular Weight  | 98.10                                               |
| Grade / Standard  | 98% min.                                            |
| Physical Form     | Crystalline solid — appearance as per specification |
| Product Category  | Organic Acids & Carboxylates                        |
| Country of Origin | India                                               |



## ANALYTICAL RESULTS

| S. No. | Test Parameter       | Specification                                       | Result                  | Method                    |
|--------|----------------------|-----------------------------------------------------|-------------------------|---------------------------|
| 1      | Description          | Crystalline solid — appearance as per specification | <b>Complies</b>         | Visual                    |
| 2      | Identification       | Conforms to the structure of the substance          | <b>Complies</b>         | FTIR / Chemical test      |
| 3      | Solubility           | As per specification                                | <b>Complies</b>         | Visual / Monograph        |
| 4      | Assay                | Not less than 98.0 % w/w                            | <b>98.57</b>            | Titrimetry / Instrumental |
| 5      | Loss on Drying       | Not more than 1.0 % w/w                             | <b>0.34</b>             | Gravimetry                |
| 6      | Residue on Ignition  | Not more than 0.5 % w/w                             | <b>0.185</b>            | Gravimetry                |
| 7      | Heavy Metals (as Pb) | Not more than 20 ppm                                | <b>Less than 10 ppm</b> | ICP-OES                   |
| 8      | Structure            | Conforms to reference structure                     | <b>Complies</b>         | FTIR / NMR                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Remarks</b><br><br>Material supplied against this specification is analysed on every production lot and <b>conforms</b> to the limits stated above in all tested parameters. Results shown are the typical values obtained for this grade.<br><br>Retained samples are held against every export consignment. Store in tightly closed original packing, in a cool, dry, well-ventilated place away from incompatible materials and direct sunlight. | <b>Checked and Approved by</b><br><br><b>Prem Panchal</b><br>Quality Assurance<br>Scapex Exports Pvt. Ltd. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|

This document sets out the standard specification for the product named above and applies to all consignments of this grade. It is issued by Scapex Exports Pvt. Ltd. as manufacturer and supplier. Refer to the Material Safety Data Sheet (MSDS) before handling.