

## **CERTIFICATE OF ANALYSIS**

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| 1. Identification  |                              |                |  |
|--|------------------------------|----------------|--|
| Catalogue<br>Number:   | D826515                      | CAS<br>Number: | 94-80-4  |
| Product:   | 2,4-D Butyl Ester            | Synonym:       | 2,4-Dichlorophenoxyacetic Acid Butyl Ester;<br>2,4-DBE; 2,4-D Butylate; Butapon; Butyl (2,4-<br>dichlorophenoxy)acetate; Butyl<br>dichlorophenoxyacetate; Esso Herbicide 10; |
| Structure:   | ÇI Q                         |                | Molecular Formula:   |
|  |                              | 5              | C12H14Cl2O3  |
|  |                              | 5              | Molecular weight:  |
|  |                              |                | 277.14   |
|  |                              |                | Source of Product:   |
|  |                              |                | N/A  |
|  |                              |                | Solubility:  |
|  |                              |                | Chloroform (Slightly),<br>Methanol (Slightly)  |
| Lot<br>Number:   | 1-TTK-7-1                    | Purity:        | 95%  |
| Shipping This Product Is Stable To Be Storage   Condition: Shipped At Room Temperature Condition: 4°C  |                              |                |  |
| 2. Warning   |                              |                |  |
| Warning 1:   | Warning 2                    | :              | Warning 3:   |
| 3. Analytical Information  |                              |                |  |
| Tests:   | Specifications:              |                | Results:   |
| Appearance   | Colourless Oil               |                | Clear Colourless Oil   |
| NMR  | Conforms to Structure        |                | Conforms   |
| MS   | Conforms to Structure        |                | Conforms   |
| HPLC Purity  | Report Result                |                | 93.46% (205 nm)  |
| Additional Information: N/A  |                              |                |  |
| Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of $\pm$ 2%. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values. |                              |                |  |
| 4. Signatures  |                              |                |  |
| Reviewed   | By Reviewed By C of<br>By By | A Approv       | red Test Date Retest Date  |

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Nicole Yip

Age

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12/23/2021

Retest Date 12/21/2025