

**DISHMAN CARBOGEN AMCIS LIMITED**

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## Certificate of Analysis

|                     |                           |                      |                         |
|---------------------|---------------------------|----------------------|-------------------------|
| <b>PRODUCT</b>      | <b>CETRIMIDE Ph. Eur.</b> | <b>REF.</b>          | <b>NDQC-SP60-CAA-06</b> |
| <b>BATCH NO.</b>    | <b>318CAA0003</b>         | <b>MFG DATE</b>      | <b>January – 2018</b>   |
| <b>BATCH SIZE</b>   | <b>3502.80 kg</b>         | <b>RETEST DATE</b>   | <b>December – 2022</b>  |
| <b>INSP LOT NO.</b> | <b>40000042019</b>        | <b>REISSUED DATE</b> | <b>06.04.2018</b>       |

| <b>SR. NO.</b> | <b>TEST</b>                                                                                                      | <b>RESULT</b>                                                                                                                     | <b>METHOD REFERENCE</b>                             | <b>SPECIFICATION</b>                                                                                                                                                                                                          |
|----------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.0            | Characters<br>Appearance                                                                                         | White voluminous, free flowing powder.                                                                                            | <Ph. Eur.>                                          | White or almost white, voluminous, free flowing powder.                                                                                                                                                                       |
|                | Solubility                                                                                                       | Freely soluble in water and in alcohol.                                                                                           | <Ph. Eur.>                                          | Freely soluble in water and in alcohol.                                                                                                                                                                                       |
| 2.0            | Identification                                                                                                   |                                                                                                                                   |                                                     |                                                                                                                                                                                                                               |
|                | A Ultraviolet absorption spectrophotometry                                                                       | 0.011                                                                                                                             | <Ph. Eur. (2.2.25)>                                 | Absorbance of 1.0 % w/v solution in alcohol R at 260 nm to 280 nm has a maximum of 0.05                                                                                                                                       |
|                | B Colour development                                                                                             | A yellow precipitate is formed.                                                                                                   | <Ph. Eur.>                                          | A yellow precipitate is formed with potassium ferriyanide                                                                                                                                                                     |
|                | C Solution characterisation                                                                                      | 2 % w/v solution is froths copiously when shaken.                                                                                 | <Ph. Eur.>                                          | 2 % w/v solution in water froths copiously when shaken                                                                                                                                                                        |
|                | D Thin layer chromatography                                                                                      | Complies with working reference standard                                                                                          | <Ph. Eur. (2.2.27)>                                 | The principal spot in the chromatogram obtained with the test solution should be similar in position, colour and size to the principal spot in the chromatogram obtained with the working reference standard solution.        |
|                | E Bromide                                                                                                        | Yellow precipitate observed.                                                                                                      | <Ph. Eur. (2.3.1)>                                  | It gives reaction (a) of bromides.                                                                                                                                                                                            |
| 3.0            | Appearance of solution (2 % w/v solution in water)                                                               | The solution is clear.<br><br>The solution is colourless and not more intensely coloured than reference solution B <sub>6</sub> . | <Ph. Eur. (2.2.1)><br><Ph. Eur. Method II, (2.2.2)> | For clarity : The solution is clear i.e. compared against reference suspension I.<br>For colour of solution: The solution is colourless and it should not be more intensely coloured than reference solution B <sub>6</sub> . |
| 4.0            | Acidity or alkalinity                                                                                            | 0.08 ml of 0.1 M hydrochloric acid is used.                                                                                       | <Ph. Eur.>                                          | Not more than 0.1 ml of 0.1M hydrochloric acid or 0.1M sodium hydroxide is required.                                                                                                                                          |
| 5.0            | Amines and amine salts                                                                                           | Two inflexion observed. Volume of titrant used 0.7 ml 0.1 M tetra butyl ammonium hydroxide solution.                              | <Ph. Eur.>                                          | Not more than 2.0 ml of 0.1 M tetra butyl ammonium hydroxide solution.                                                                                                                                                        |
| 6.0            | Loss on drying (at 105 °C for 2 hours)                                                                           | 0.23                                                                                                                              | <Ph. Eur. (2.2.32)>                                 | Maximum 2.0 % w/w                                                                                                                                                                                                             |
| 7.0            | Sulfated ash                                                                                                     | 0.07                                                                                                                              | <Ph. Eur. (2.4.14)>                                 | Maximum 0.5 % w/w                                                                                                                                                                                                             |
| 8.0            | Assay (on dried basis)                                                                                           | 98.5                                                                                                                              | <Ph. Eur.>                                          | Minimum 96.0 % w/w and Maximum 101.0 % w/w                                                                                                                                                                                    |
|                | <b>Additional test</b>                                                                                           |                                                                                                                                   |                                                     |                                                                                                                                                                                                                               |
| 9.0            | Related substances (TLC)<br>1.) Each individual spot<br>2.) Total number of spots                                | Complies<br>Complies                                                                                                              | AMV<br>R-001-00/II                                  | Maximum 1.0 %<br>Maximum 2                                                                                                                                                                                                    |
| 10.0           | Residual solvent<br>1.) Isopropyl alcohol                                                                        | BDL                                                                                                                               | AMV<br>R-001-00/IV                                  | Maximum 3000 ppm                                                                                                                                                                                                              |
| 11.0           | Aerobic microbial count and yeast mould<br>→ Total Aerobic microbial count<br>→ Total combined yeast/mould count | Complies<br>Complies                                                                                                              | <Ph. Eur., (2.6.12)>                                | Not more than 1000 CFU/gm<br>Not more than 100 CFU/gm                                                                                                                                                                         |

**Remark :** The material conform to the above specification.

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