

## Certificate of analysis



|                 |             |   |         |
|-----------------|-------------|---|---------|
| Article         | 4277        | Hypromellose, nominale Viskosität 4000      |         |
| Synonym         |             | Methocel E4M®, Hydroxypropylmethylcellulose |         |
| Synonym         |             | Hypromellose, apparent viscosity 4000       |         |
| Batch           | 23000497    |   |         |
| Specification   | Ph.Eur.10.6 |   |         |
| Production date | 07.2022     | Retest date                                 | 07.2025 |

| Test                          | Specification              | Result     |   |
|-------------------------------|----------------------------|------------|---|
| Substitution type             | *****                      | 2910       |   |
| Characters                    | According to specification | Complies   |   |
| Appearance                    | According to specification | Complies   |   |
| Solubility                    | According to specification | Complies   |   |
| Identification                | According to specification | Complies   |   |
| A                             | According to specification | Complies   |   |
| B                             | According to specification | Complies   |   |
| C                             | According to specification | Complies   |   |
| D                             | According to specification | Complies   |   |
| Flocculation temperature      | Min. 50 °C                 | 52 °C      |   |
| Tests                         | According to specification | Complies   |   |
| Appearance of solution        | According to specification | Complies   |   |
| pH-Value                      | 5,0 ... 8,0                | 6,0        |   |
| Viscosity                     | 3000 ... 5600 mPa*s        | 4233 mPa*s |   |
| Loss on drying                | Max. 5,0 %                 | 2,4 %      |   |
| Sulphated ash                 | Max. 1,5 %                 | 0,3 %      | # |
| Assay (Methoxy groups)        | 28,0 ... 30,0 %            | 28,8 %     | # |
| Assay (Hydroxypropoxy groups) | 7,0 ... 12,0 %             | 9,0 %      | # |
| Complies specification        |                            | Yes        |   |

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|              |            |             |                                 |
|--------------|------------|-------------|---------------------------------|
| Release date | 22.06.2023 | Released by | Frau Apoth. Dr.<br>Schücker, QP |
|--------------|------------|-------------|---------------------------------|

Results marked with # were taken from the manufacturer's certificate.

The batch 23000497 complies specification.

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