**Table S12** Long-term stability study of prepared hydrogels under refrigerated conditions (5 ± 3°C)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Formulations | TFG F2 | | | | Plain Gel | | | |
|  | 0 month | 6 months | 9 months | 12 months | 0 month | 3 months | 6 months | 12 months |
| Appearance | White color | | | | Pale yellow | | | |
| Consistency and homogeneity | Gel-like consistency with smooth and homogeneous properties | | | | Gel-like consistency with smooth and homogeneous properties | | | |
| Spreadability (cm) | 5.034 ± 0.048 | 5.012 ± 0.014 | 4.998 ± 0.079 | 4.986 ± 0.035 | 5.23 ± 0.089 | 5.211 ± 0.057 | 5.167 ± 0.037 | 5.087 ± 0.033 |
| Extrudability (g) | 154.372 ± 1.428 | 153.751 ± 1.547 | 155.368 ± 1.764 | 157.2 ± 1.258 | 146.125 ± 2.147 | 147.284 ± 1.234 | 147.873 ± 1.354 | 148.325 ± 1.359 |
| pH | 6.736 ± 0.018 | 6.657 ± 0.038 | 6.773 ± 0.024 | 6.623 ± 0.014 | 6.652 ± 0.035 | 6.643 ± 0.134 | 6.653 ± 0.032 | 6.623 ± 0.072 |
| Viscosity (mPa.s) at a Shear rate of 25.1/sec | 450.042 ± 3.464 | 452.034 ± 2.346 | 452.132 ± 2.657 | 450.3344 ± 3.214 | 407.73 ± 2.137 | 407.123 ± 3.211 | 406.357 ± 2.244 | 407.133 ± 3.338 |
| Drug content (%) | 98.647 ± 1.124 | 98.253 ± 1.233 | 98.147 ± 1.243 | 97.221 ± 1.225 | 98.436 ± 1.159 | 98.124 ± 1.287 | 97.369 ± 1.118 | 97.123 ± 2.134 |
| Syneresis (%) | 0.671 ± 0.001 | 0.682 ± 0.002 | 0.686 ± 0.001 | 0.693 ± 0.003 | 0.941 ± 0.003 | 0.944 ± 0.002 | 0.953 ± 0.001 | 0.986 ± 0.002 |
| Drug-excipient compatibility | Compatible | | | | Compatible | | | |

Results are presented as Mean ± SD