Table 4: reaction rate constant constants determined in this study with Eq. (6) for Tref = 140°C for oxidation of pure FAMEs, Smoluchowski limits and diffusion-controlled reactions rate constants.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Parameters** | **Oleate (i=1)** | **Linoleate (i=2)** | **Linolenate (i=3)** | **Comments** |
|  |  | 3.00·10-4 | 7.00·10-4 | 9.00·10-4 | In the range described in Table 2 |
|  | 90 | 79 | 67 | In the range described in Table 2 |
|  |  | 3.80·103 | 8.80·103 | 13.0·103 | As described in Table 2 |
|  | 14.0 | 14.0 | 14.0 | Guessed from the median range of values obtained for *ter*-butoxyl radical (values are ranging from 0 and 28 kJ·mol-1)  ([Gray & Williams, 1959](#_ENREF_31)) |
|  |  | 2.00·106 | 107 | 107 | Same values for linoleate and linolenate as described in Table 2 for linoleate. The value used for oleate is the one used for methyl-4-pentenoate ([Wang & Ni, 2016](#_ENREF_106)) |
|  | 0 | 0 | 0 | As described in Table 2 |
|  |  | 106 | 106 | 106 | As described in Table 2 |
|  | 0 | 0 | 0 | As described in Table 2 |
|  |  | 18.9·10-2 | 42.2·10-2 | 84.3·10-2 | As described in Table 2 |
|  | 44.0 | 28.0 | 28.0 | In the range described in Table 2 |
|  |  | 1.14·108 | 1.14·108 | 1.14·108 | As described for linoleate in Table 2 and used for oleate and linolenate |
|  | 47 | 47 | 47 | As described for linoleate in Table 2 and used for oleate and linolenate |
|  |  | 4.16·105 | 5·.76 106 | 1.43·107 | - |
|  | 45 | 66 | 67 | - |
|  | 8.32·106 | 8.20·106 | 8.20·106 | From Eq. (8) |
|  | 3.97·105 | 3.38·106 | 5.21·106 | From Eq. (7) and close from values reported in Table 2 |
|  |  | 3.10·107 | 3.24·107 | 3.36·107 | as described by [Okamba-Diogo et al. (2015)](#_ENREF_60) |
|  | 35 | 35 | 35 |
|  | 8.32·106 | 8.20·106 | 8.20·106 | From Eq. (8) |
|  | 6.48·106 | 6.54·106 | 6.59·106 | From Eq. (7) |
|  |  | 3.21·106 | 9.4·106 | 1.17·107 | From Eq. (4) with |

Monomolecular reaction rate constants in s-1 and bimolecular reaction rate constants in m3·mol-1·s-1. Activation energy in kJ·mol-1.