Table 2: reaction rate constants described in the literature for the oxidation of pure FAMEs.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Reactions** | **Self/Cross-reaction** | **Rates** | **Effective**  **rates** | **Rates at** | **Ea (kJ·mol-1)** |
|  | Self |  |  | (2.11 ± 1.86) ×10-4 at 140°Ca | 74.8±5.58a  104.1b |
| Self |  |  | (5.93 ± 5.23) ×10-4 at 140°Ca | 64.7 ±4.26a  88.7b |
| Self |  |  | (6.11 ± 5.44)·10-4 at 140°Ca | 51.2 ± 8.23a  73.6b |
|  | Self |  |  | (3.80 ± 0.23) ×103 at 30°Cc | nd\* |
| Cross |  |
| Cross |  |
| Cross |  |  | (8.80 ± 0.53)×103 at 30°Cc | nd |
| Self |  |
| Cross |  |
| Cross |  |  | (13.0 ± 0.78) ×103 at 30°Cc | nd |
| Cross |  |
| Self |  |
|  | Self |  |  | nd | nd |
| Self |  |  | 107 at 140°Cd | 0 |
| Self |  |  | nd | nd |
|  | Self |  |  | 106 at 30°Ce | 0 |
| Self |  |
| Self |  |
|  | Self |  |  | 18.9·10-2 at 140°Cf | 44.0b  47.0f  48.3g |
| Cross |  |
| Cross |  |
| Cross |  |  | 42.2·10-2 at 140°Cf | 31.0b  33.0 f  25.5g |
| Self |  |
| Cross |  |
| Cross |  |  | 84.3·10-2 at 140°Cf | 27.0b  31.0 f  23.8g |
| Cross |  |
| Self |  |
|  | Self |  |  | nd | nd |
| Self |  |  | 1.14·108 at 140°Ch | 47.0h |
| Self |  |  | nd | nd |
|  | Self |  |  | 5.30·102 at 30°Ci  3.00·105 at 140°Cb | 50.0b |
| Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Self |  |  | 0.3·103 at 25°Cj  4.40·103 at 30°Ci  2.50·106 at 140°Cb | 43.5b |
| Cross |  |  | nd | nd |
| Self |  |  | 1.80·104 at 30°Ci  1.80·106 at 140°Cb | 49.0b |
|  | Self |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Self |  |  | 1.00·105 at 140°Ck,l | k,l |
| Cross |  |  | nd | nd |
| Self |  |  | nd | nd |
|  | Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Cross |  |  | 1.00·105 at 140°Cl | 0l |
| Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |
| Cross |  |  | nd | nd |

Monomolecular reaction rate constants in s-1 and bimolecular rates in m3·mol-1·s-1. Activation energy in kJ·mol-1. a: (Touffet et al., 2021), b: (Richaud et al., 2012), c: (Small & Scaiano, 1978), d: (Tavadyan, Khachoyan, Martoyan, & Kamal-Eldin, 2007), e: (Ingold, 1969), f: (Korcek et al., 1972), g: (Navaneeth et al., 2017), h: (Oakley, Casadio, Shull, & Broadbelt, 2018; Pfaendtner & Broadbelt, 2008), i: (Howard & Ingold, 1967), j: (Bateman & Gee, 1951), k: (Pfaendtner & Broadbelt, 2008), l: (Orlova, Gambardella, Harmon, Kryven, & Iedema, 2021), \*: no data available.