

Table 1: The experimental range of reaction conditions

Reaction conditions	Bottom limit (-1)	Top limit (+1)
Reaction temperature: $T$ [°C]	25	65
Reaction time: $t$ [h]	1.5	2.0
Weight ratio of catalyst to oil: $c$ [wt-%]	0.89	1.33
Molar ratio ethanol to oil: $MR$ [-]	6.0:1	7.5:1
Rotations of disperser: $Ro$ [rpm]	10000	20000