**USE OF HETEROGENEOUS CATALYSTS IN METHYLIC BIODIESEL PRODUCTION INDUCED BY MICROWAVE IRRADIATION**

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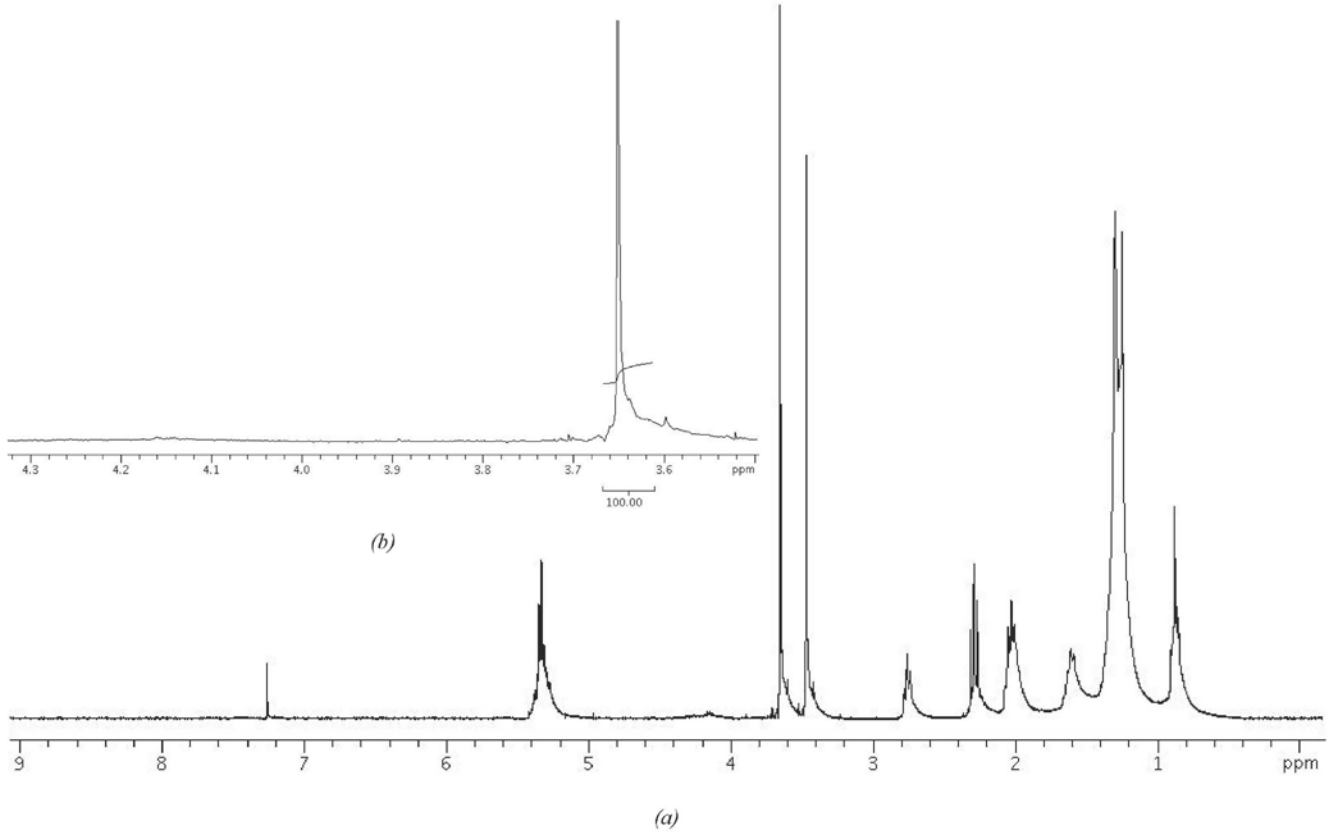


***Figure 1S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 5 wt. % of CaO and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

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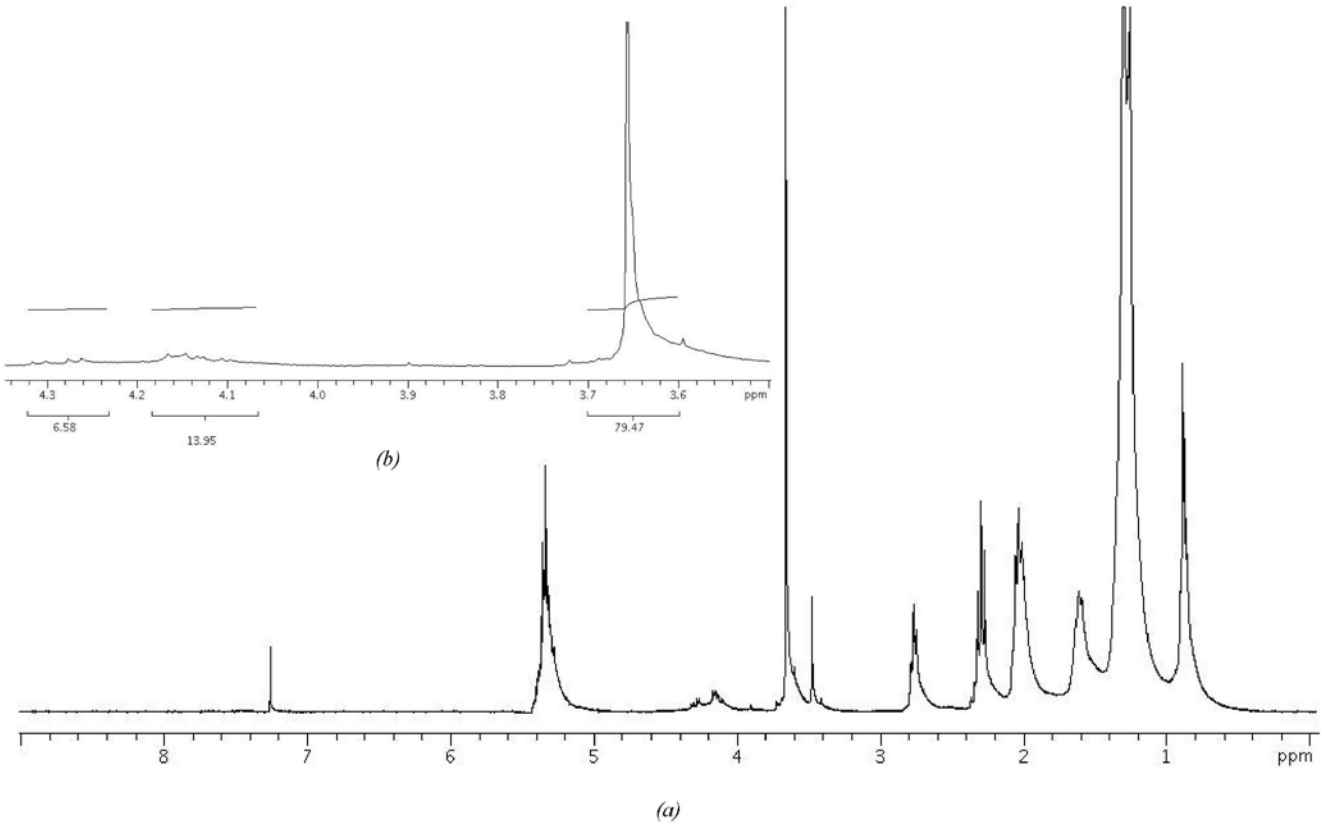


***Figure 2S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $CaO/Al_2O_3$ (1.19 g of active CaO) and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

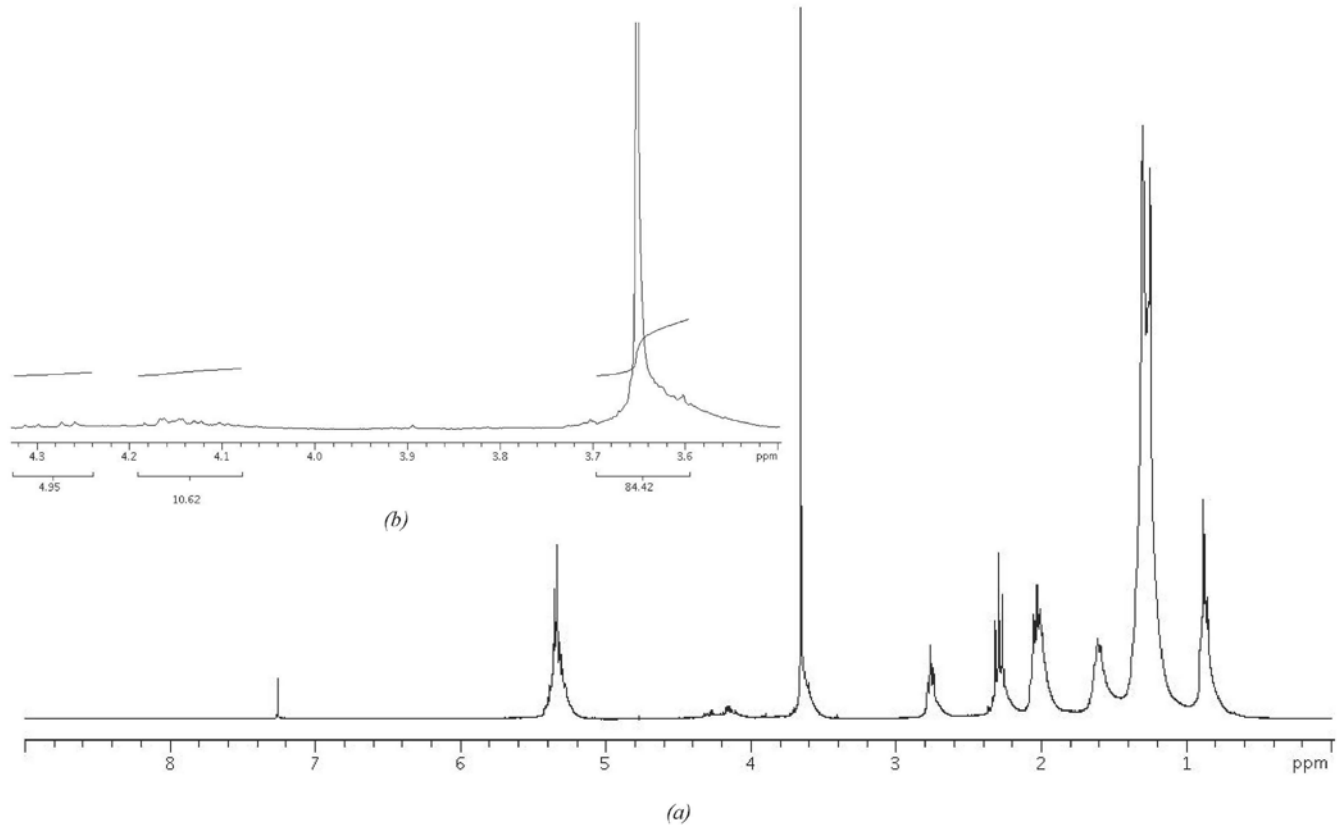


***Figure 3S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $KI/Al_2O_3$ (0.72 g of active KI) and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

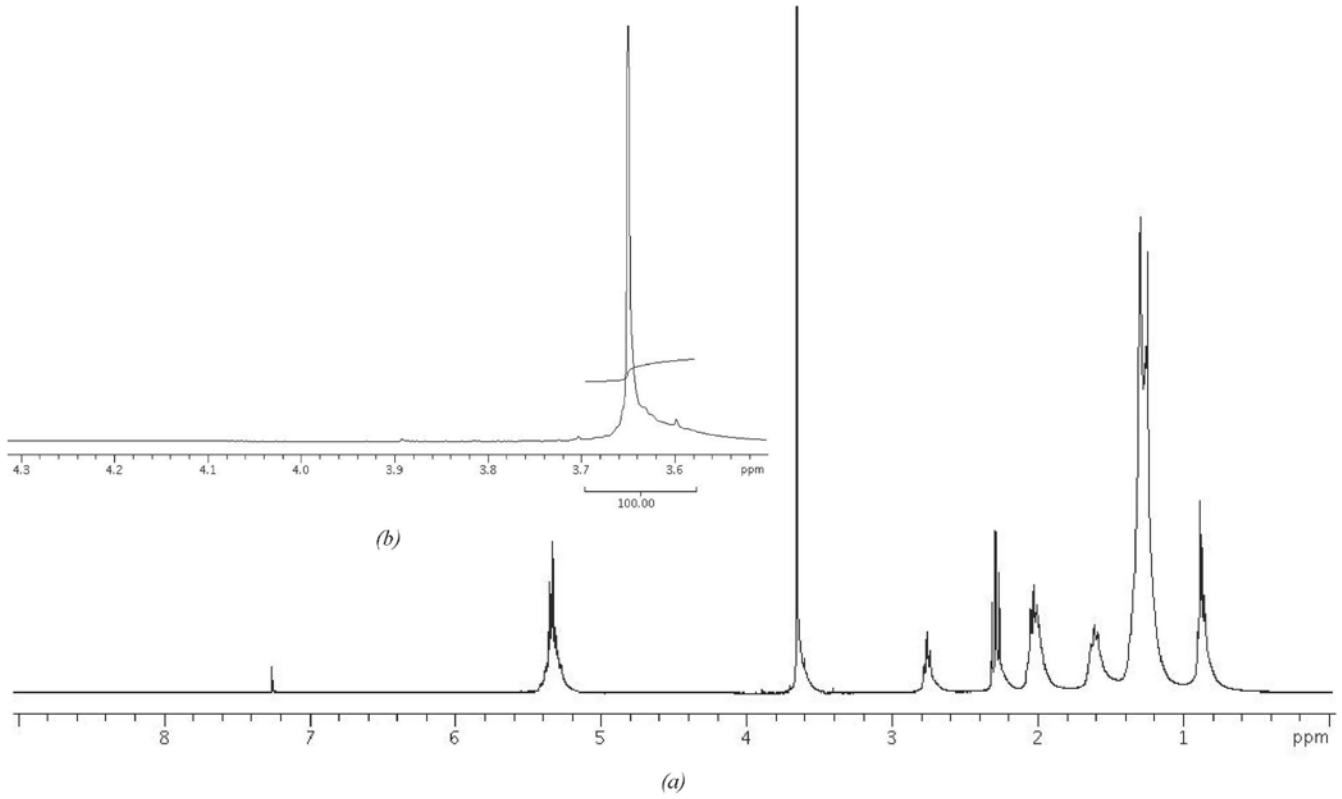


***Figure 4S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $KOH/Al_2O_3$ (0.72 g of active KOH) and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

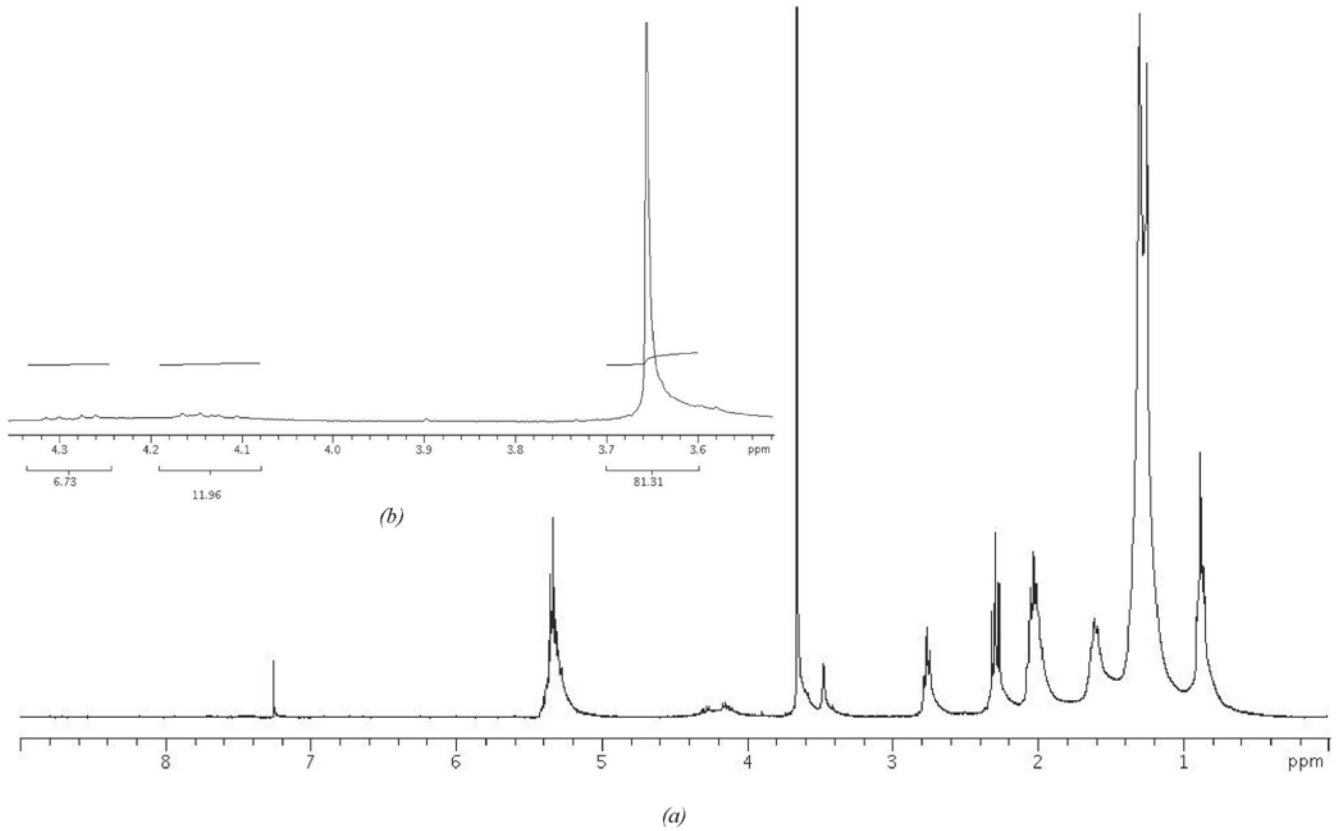


***Figure 5S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $CaO/MnO_2$ (2.34 g of active CaO) and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

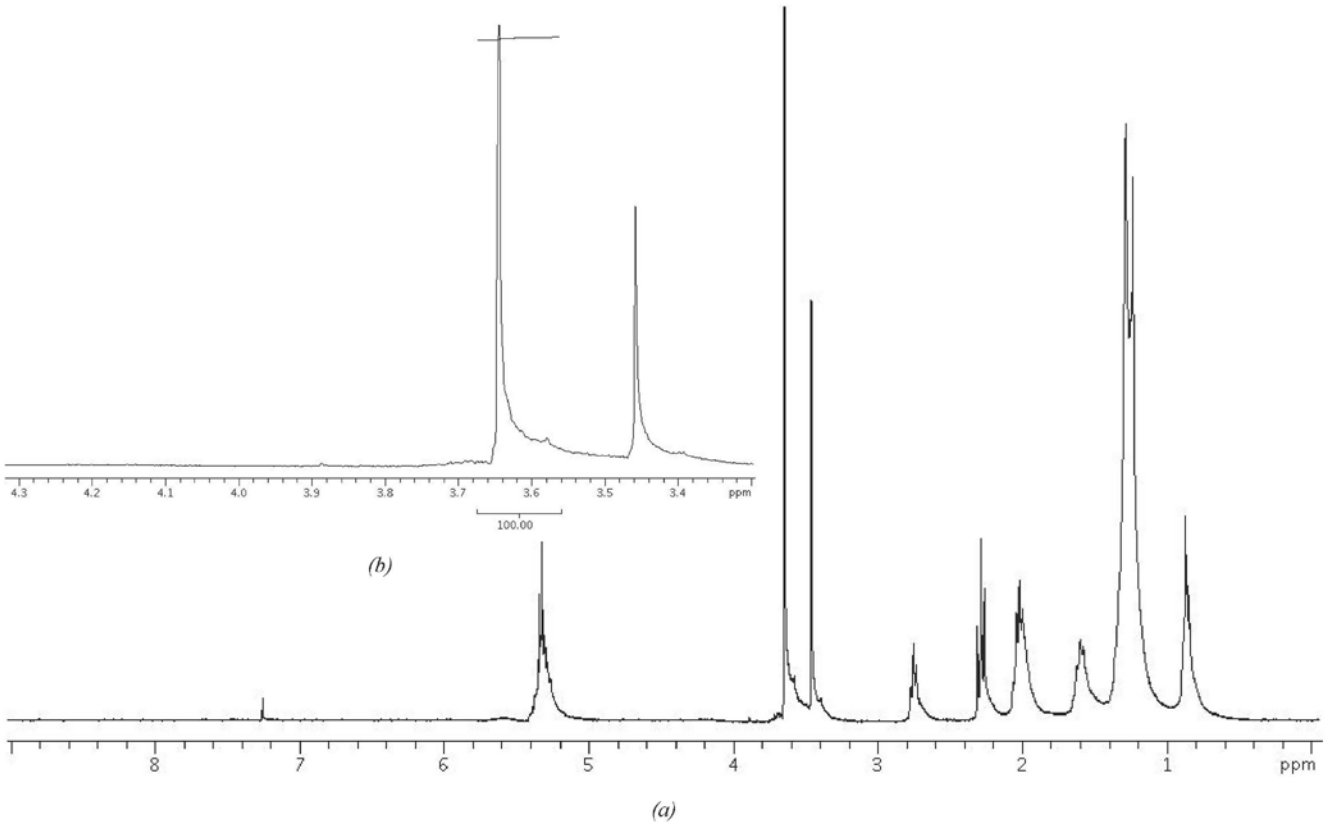


***Figure 6S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $K_2CO_3/Al_2O_3$ (0.72 g of active $K_2CO_3$) and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

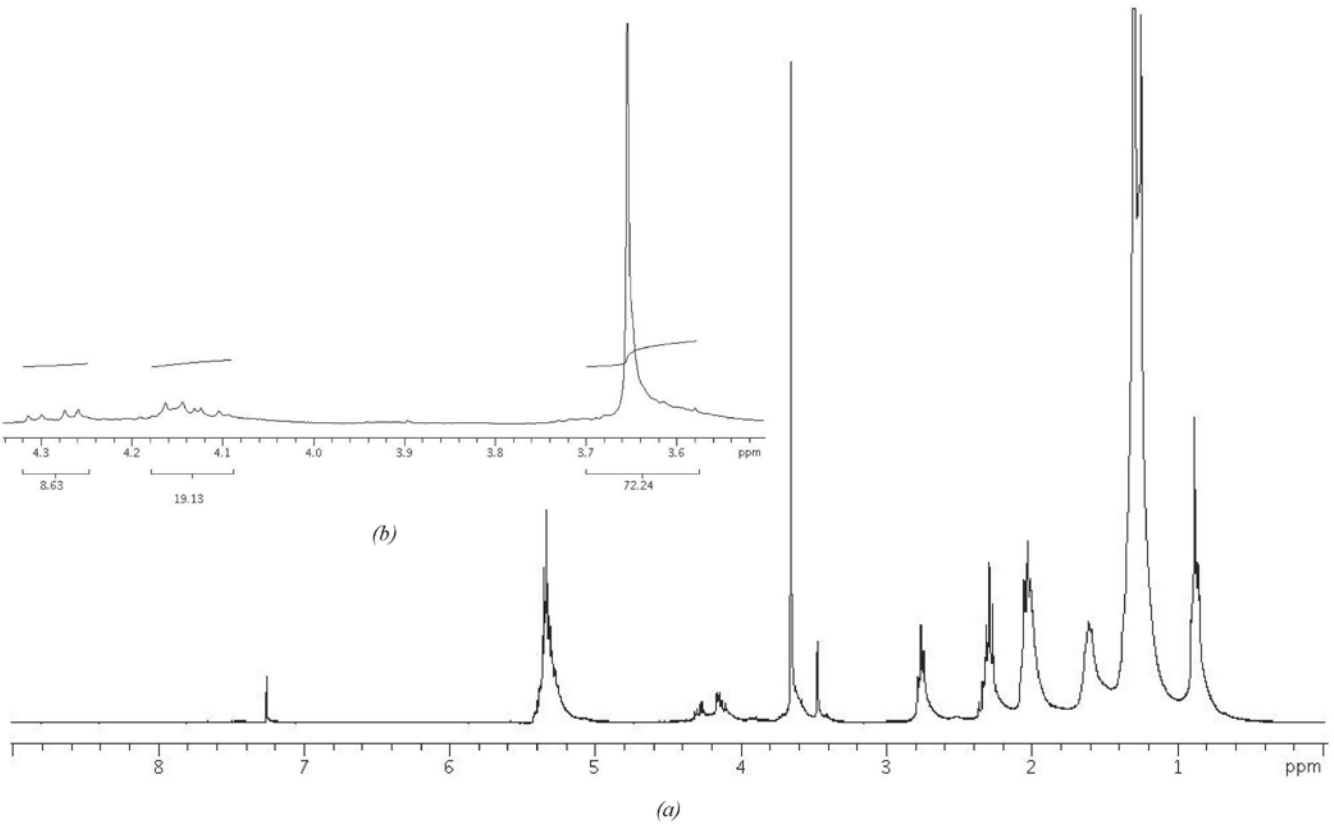


***Figure 7S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $CaO/TiO_2$ (3.17 g of active CaO) and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

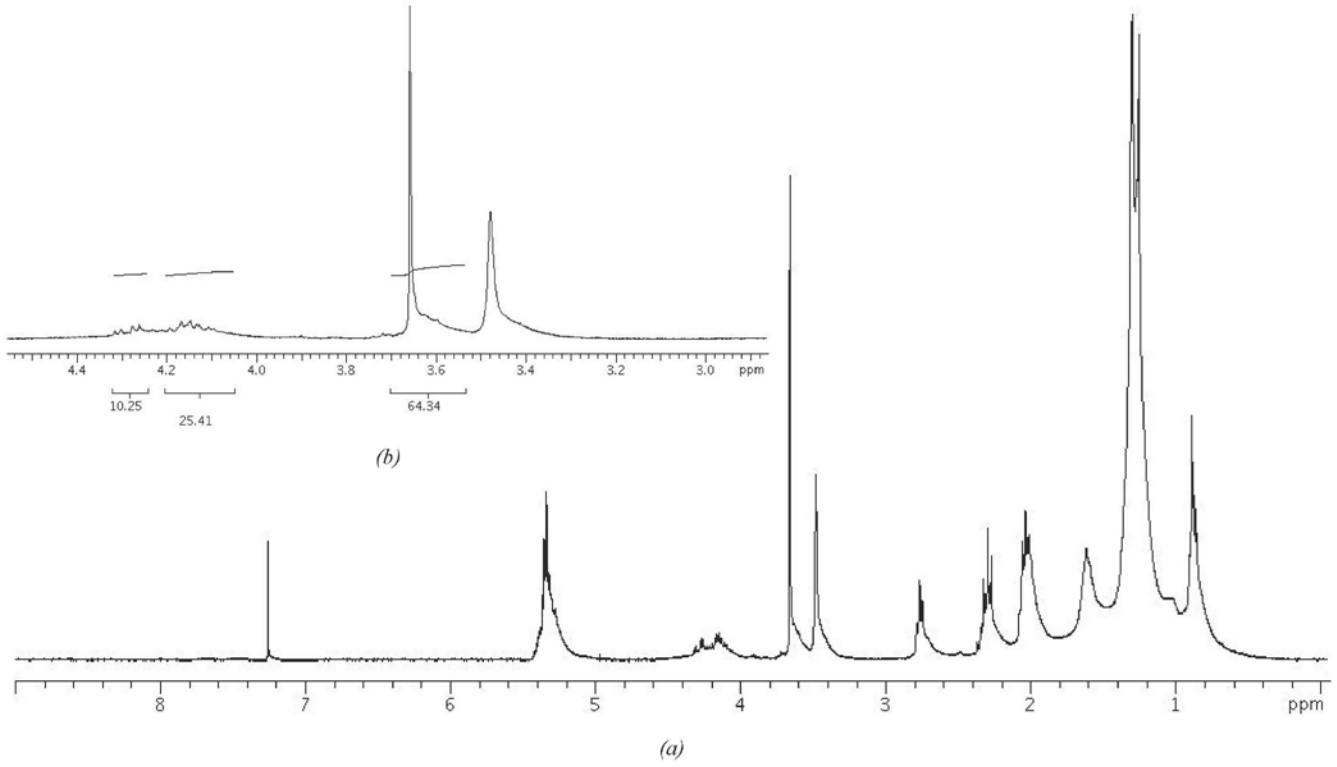


***Figure 8S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of CaO and 15 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

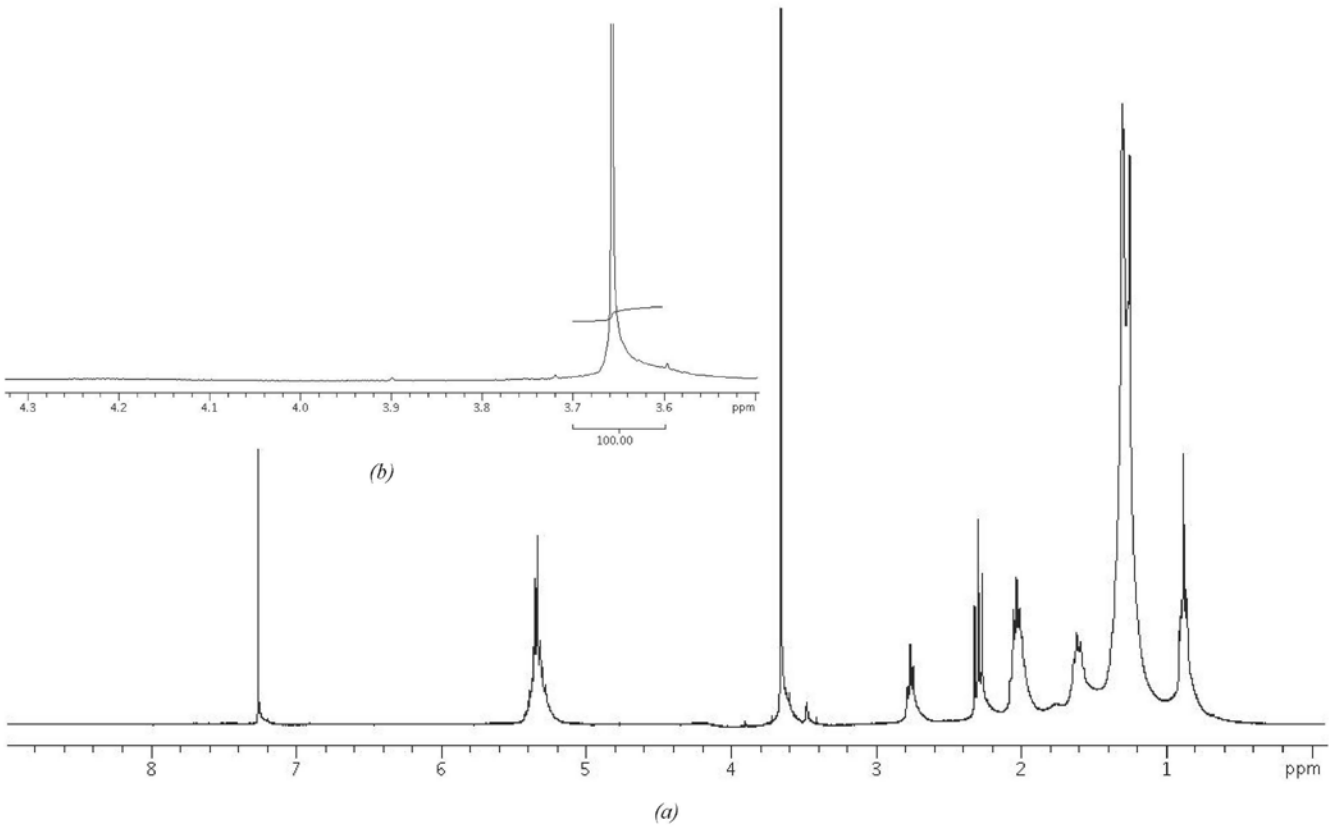


***Figure 9S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 5 wt. % of CaO and 30 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

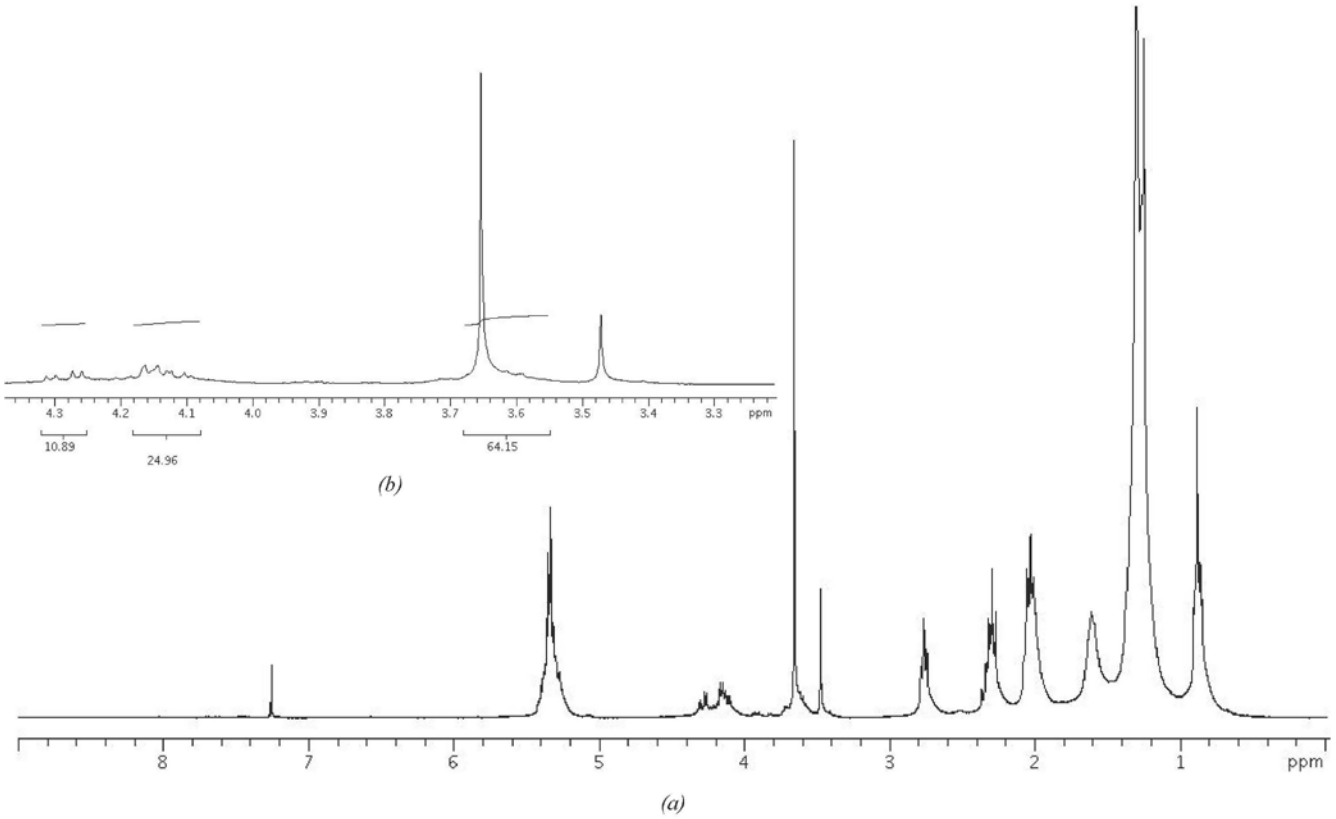


***Figure 10S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 2.5 wt. % of CaO and 30 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

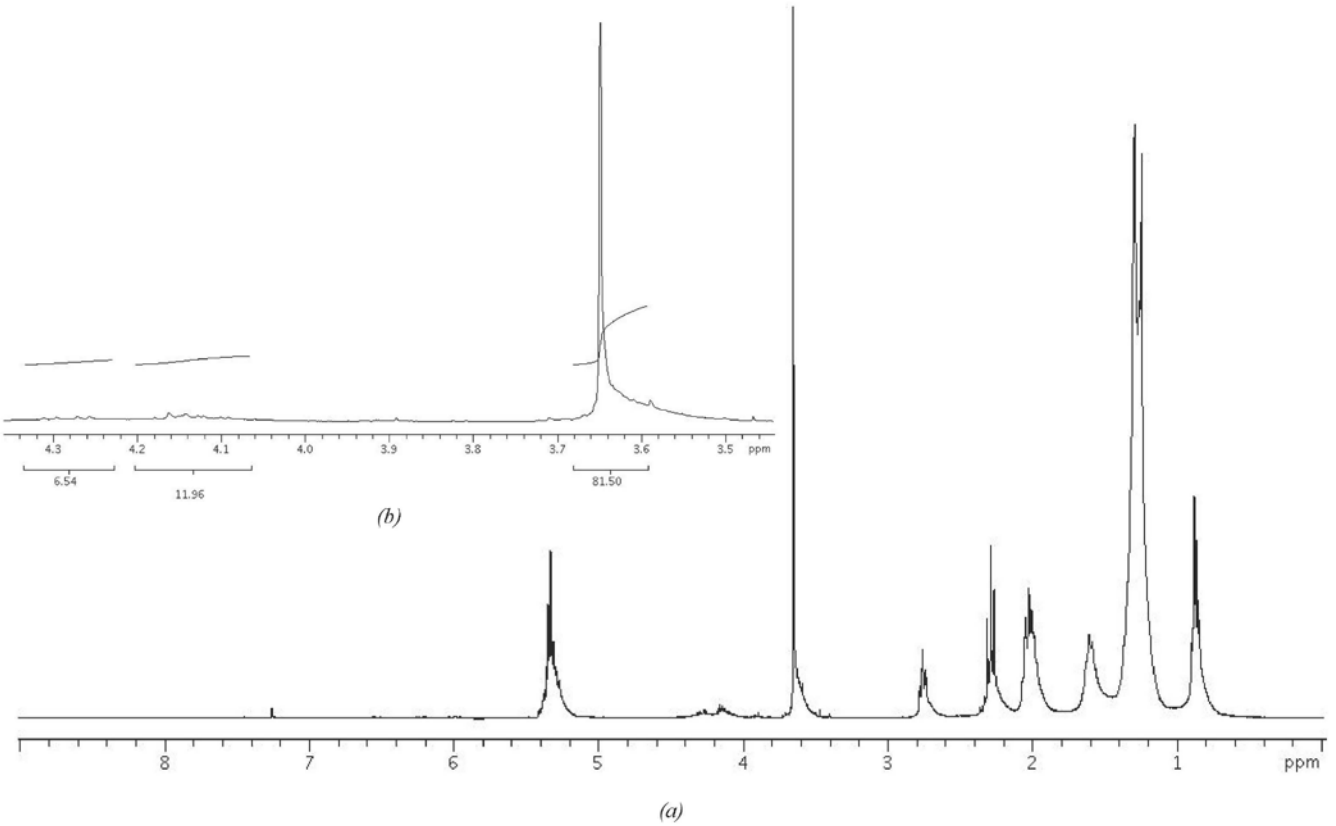


***Figure 11S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $KI/Al_2O_3$ and 60 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

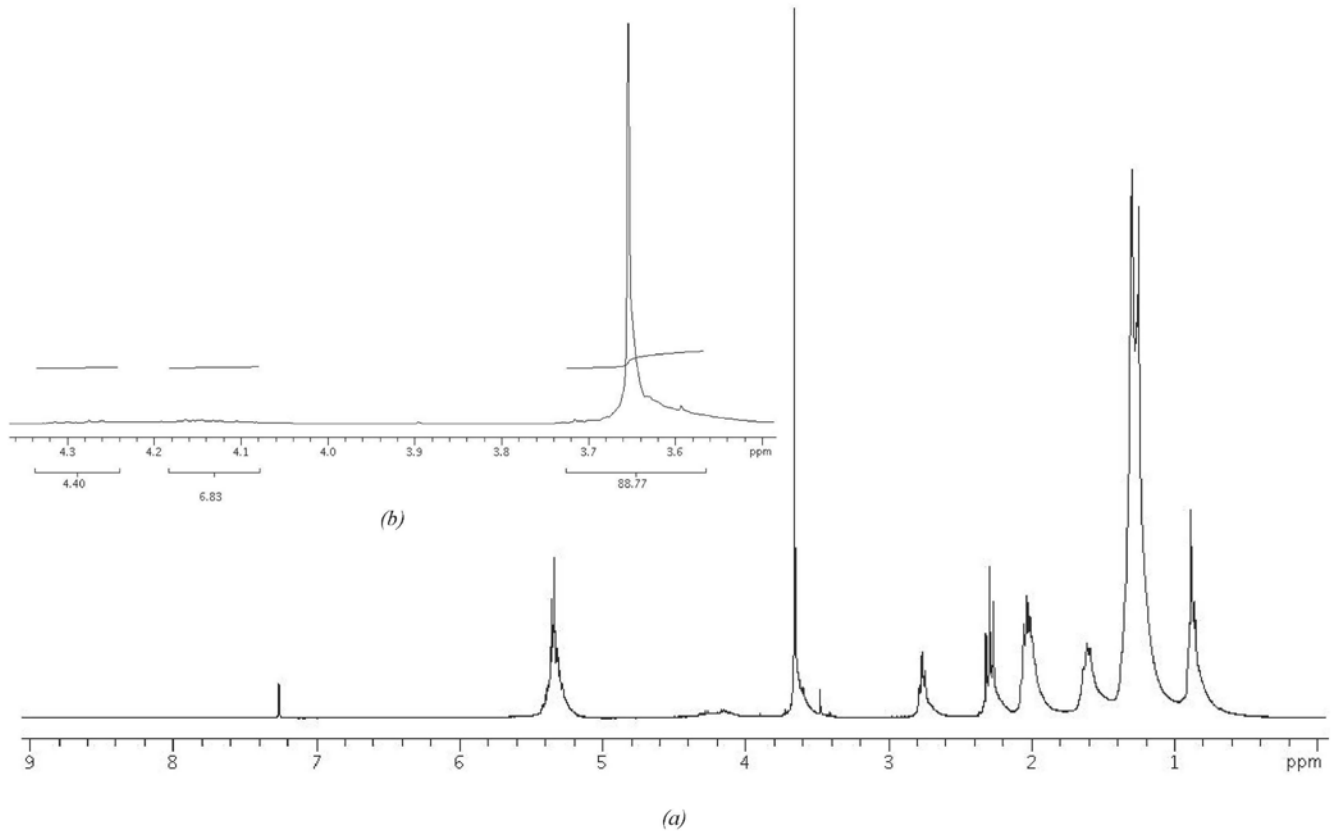


***Figure 12S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 10 wt. % of $KOH/Al_2O_3$ and 15 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

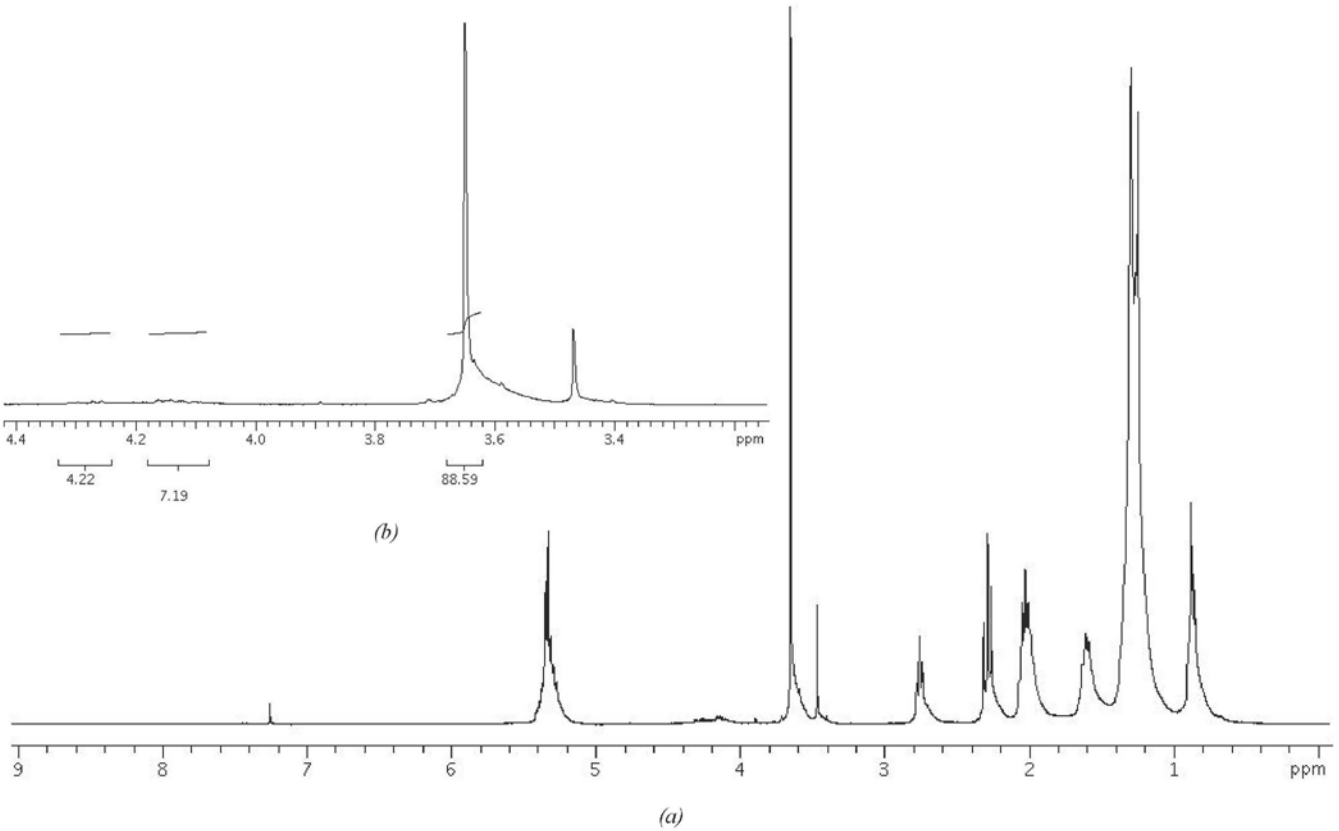


***Figure 13S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 2.5 wt. % of $K_2CO_3/Al_2O_3$ and 120 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

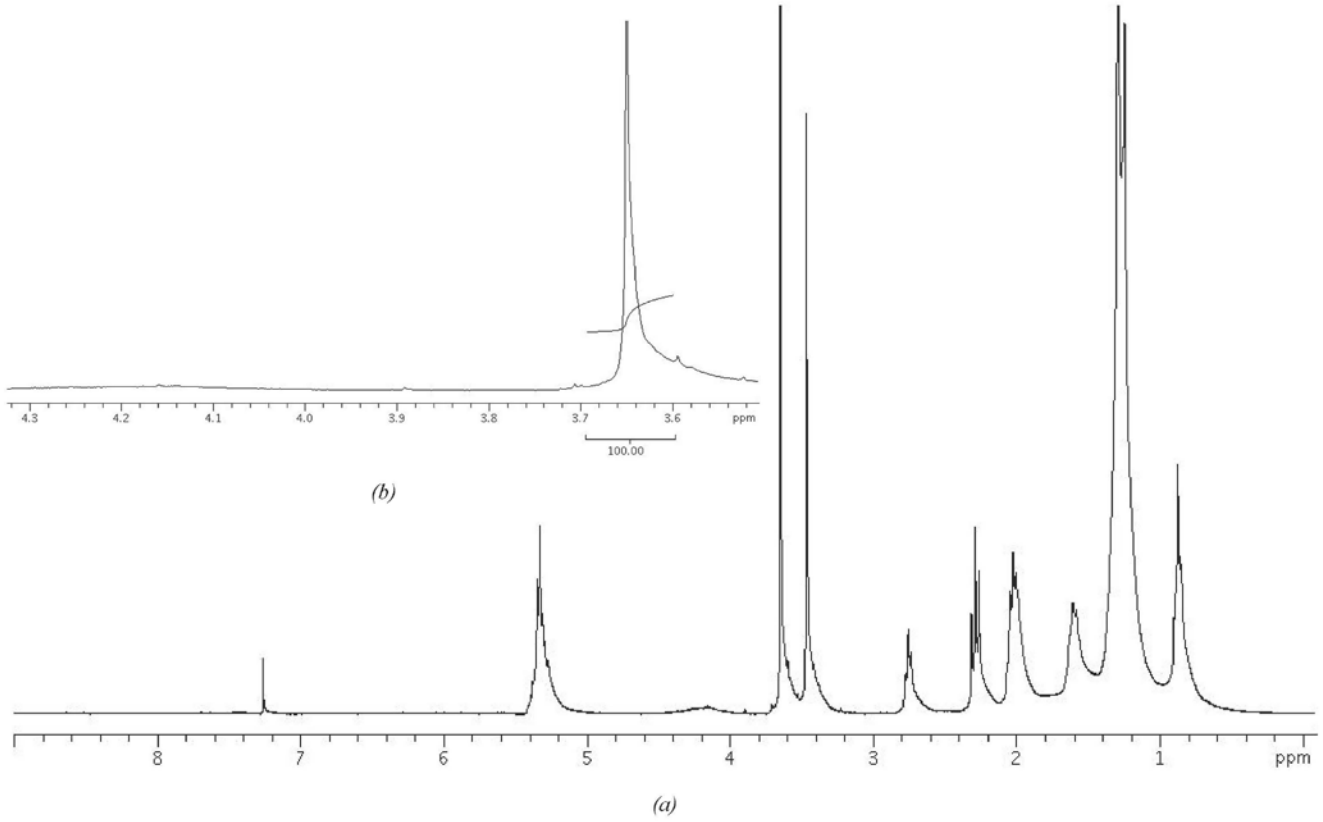


***Figure 14S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 5 wt. % of $K_2CO_3/Al_2O_3$ and 30 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*

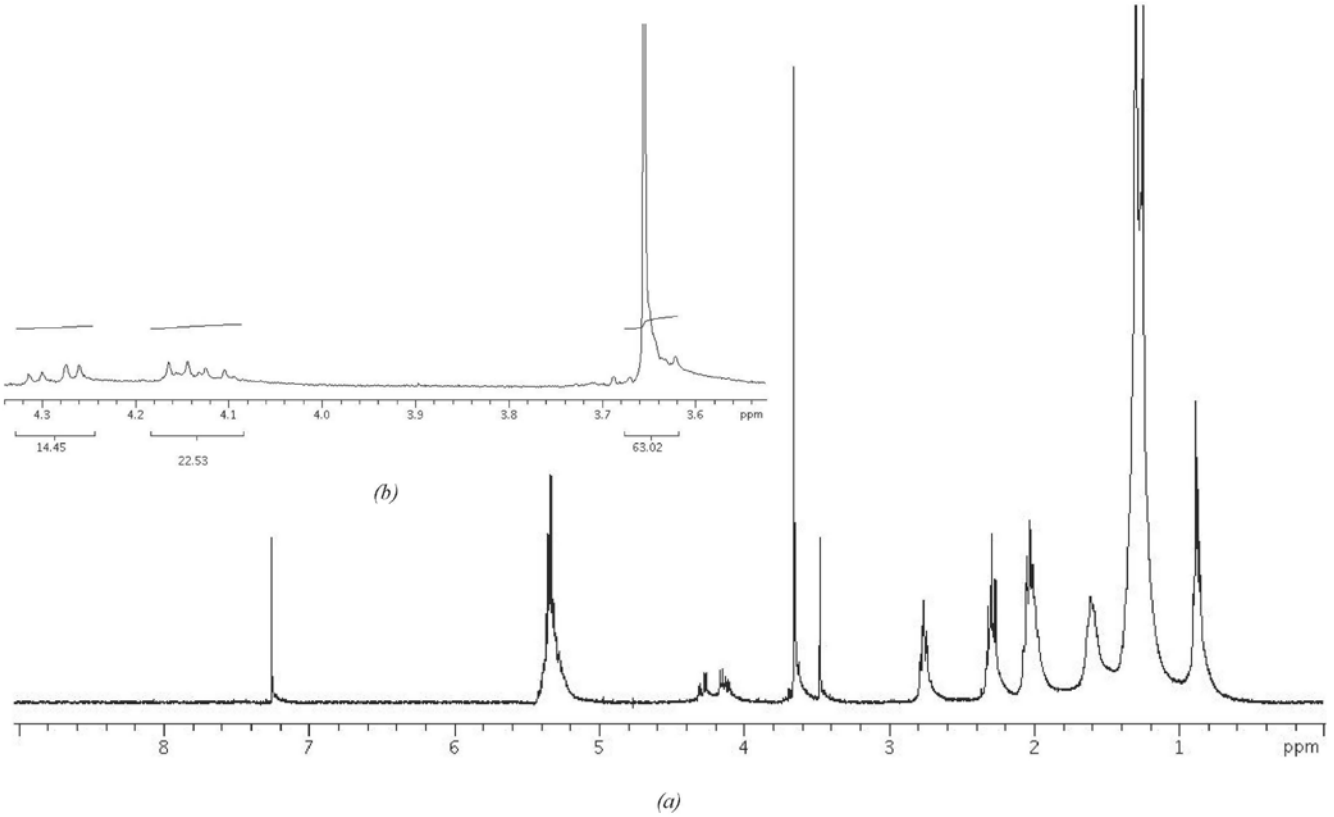


***Figure 15S.*** *$^1$H NMR spectrum in $CDCl_3$, 303 K for the reaction with sunflower oil, methanol (1:16), 2.5 wt. % of $K_2CO_3/Al_2O_3$ (second use) and 30 minutes of the microwaves irradiation. (a) Full spectrum and (b) region amplified to obtain the conversion biodiesel*