This thesis/dissertation, entitled (**THESIS/DISSERTATION TITLE IN ALL CAPS)**,prepared and submitted by (**FULL NAME OF STUDENT IN ALL CAPS)**, in partial fulfilment of the requirements for the degree of **(TITLE OF DEGREE IN ALL CAPS)** is hereby accepted.

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To God be the glory!

**Abstract of Thesis**

Elevated concentration of sulphur in diesel fuel is one of the major contributors to air pollution. To limit the amount of sulphur in fuel to less than 15 ppm, oxidative desulfurization was studied using model diesel fuel over two types of phase transfer agent (PTA), namely ammonium and phosphonium salt.

Furthermore, in oxidative desulfurization, one of the important factors that affects the conversion of sulphur compound and accelerate the reaction is agitation. It is known that the reaction of sulphur compounds in fuel with an oxidant is considerably slow, therefore determining appropriate mixing techniques is important for the enhancement of the system. In this research, oxidative desulfurization by means of high intensity proble ultrasonication and high shear mixer were also described.

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