Supplementary Information

Experimental investigation on thermophysical and tribological characteristics of conventional and biolubricating oil blended with nanoparticles

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Fig. S1 — Castor plant castor beans

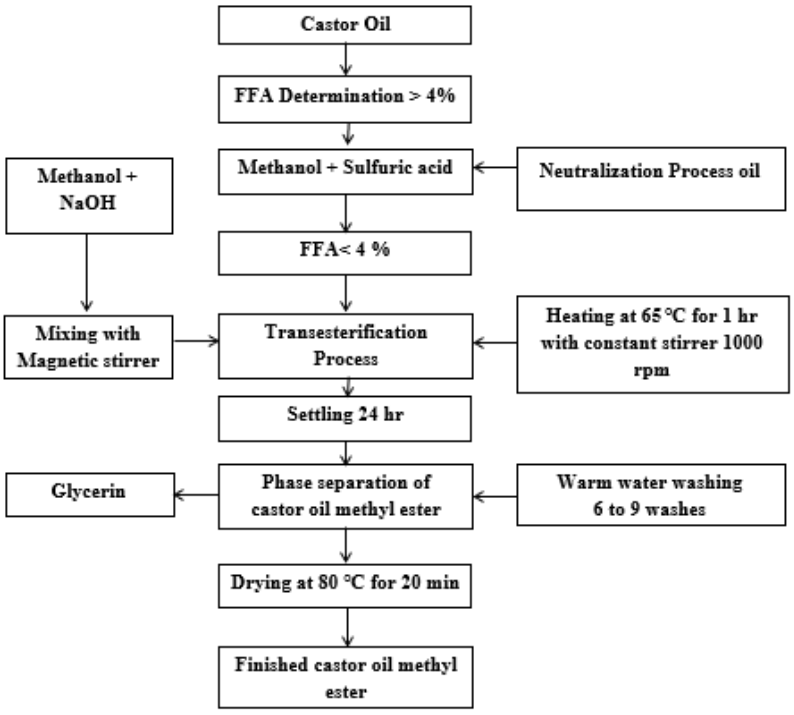

Fig. S2 — CME production process flowchart

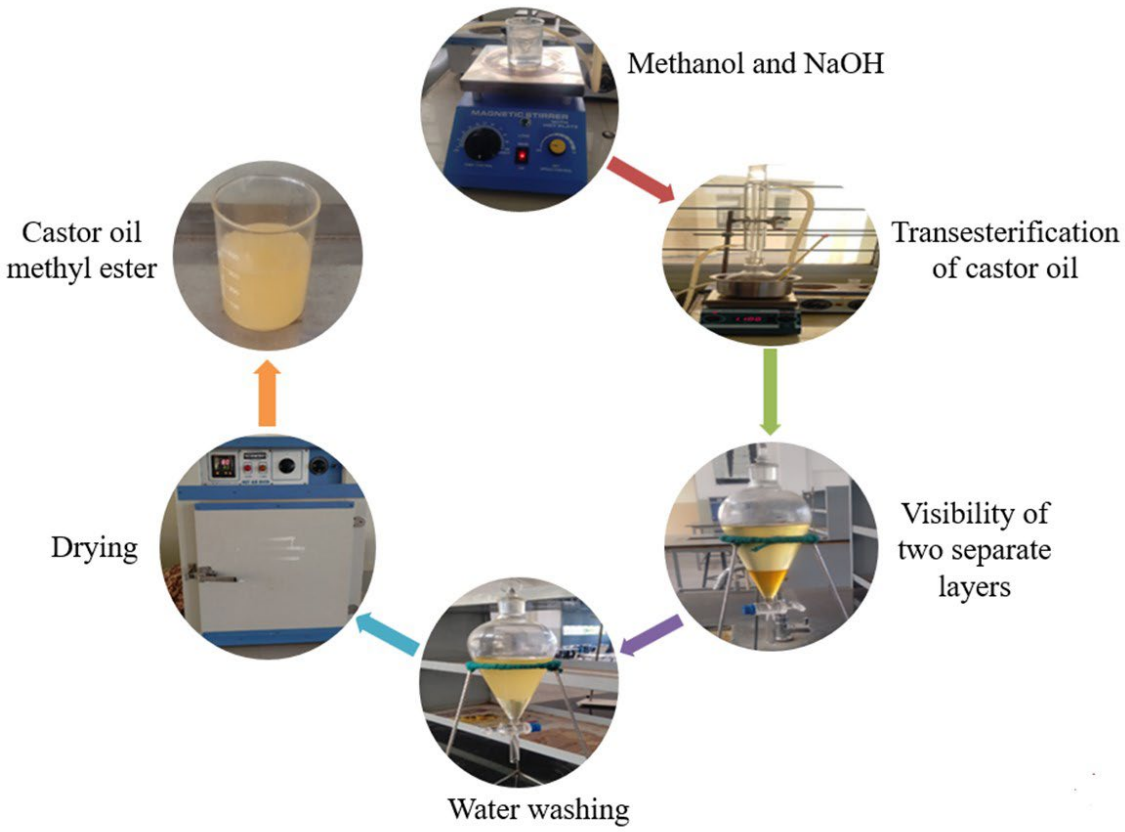

Fig. S3 — Production of CME

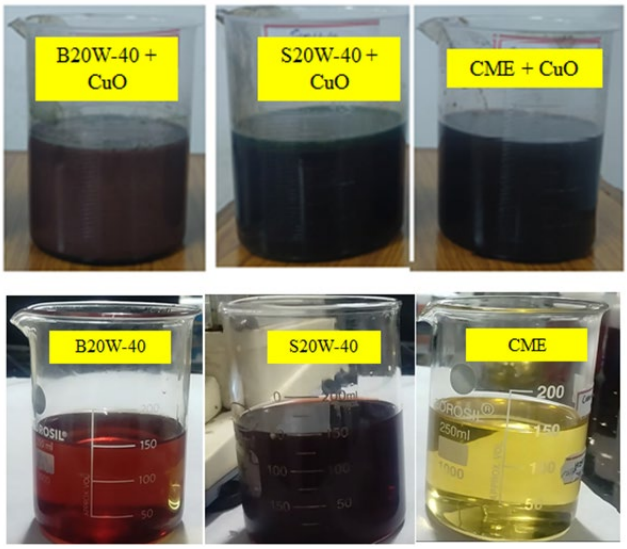

Fig. S4 — Produced base and nanolubricant

Fig. S5— Fourball wear tester

Table S1 — Thermophysical testing apparatus and standards

Name of the test	Testing equipment	ASTM standard	Uncertainty
Thermal conductivity	KD2 Pro thermal conductivity analyzer	D5334-08	± 5%
Kinematic viscosity	Redwood Viscometer	D445	± 0.26%
Flash point	Cleveland open cup apparatus	D92	± 2 °C
Pour point	Pour point apparatus	D97	± 1 °C