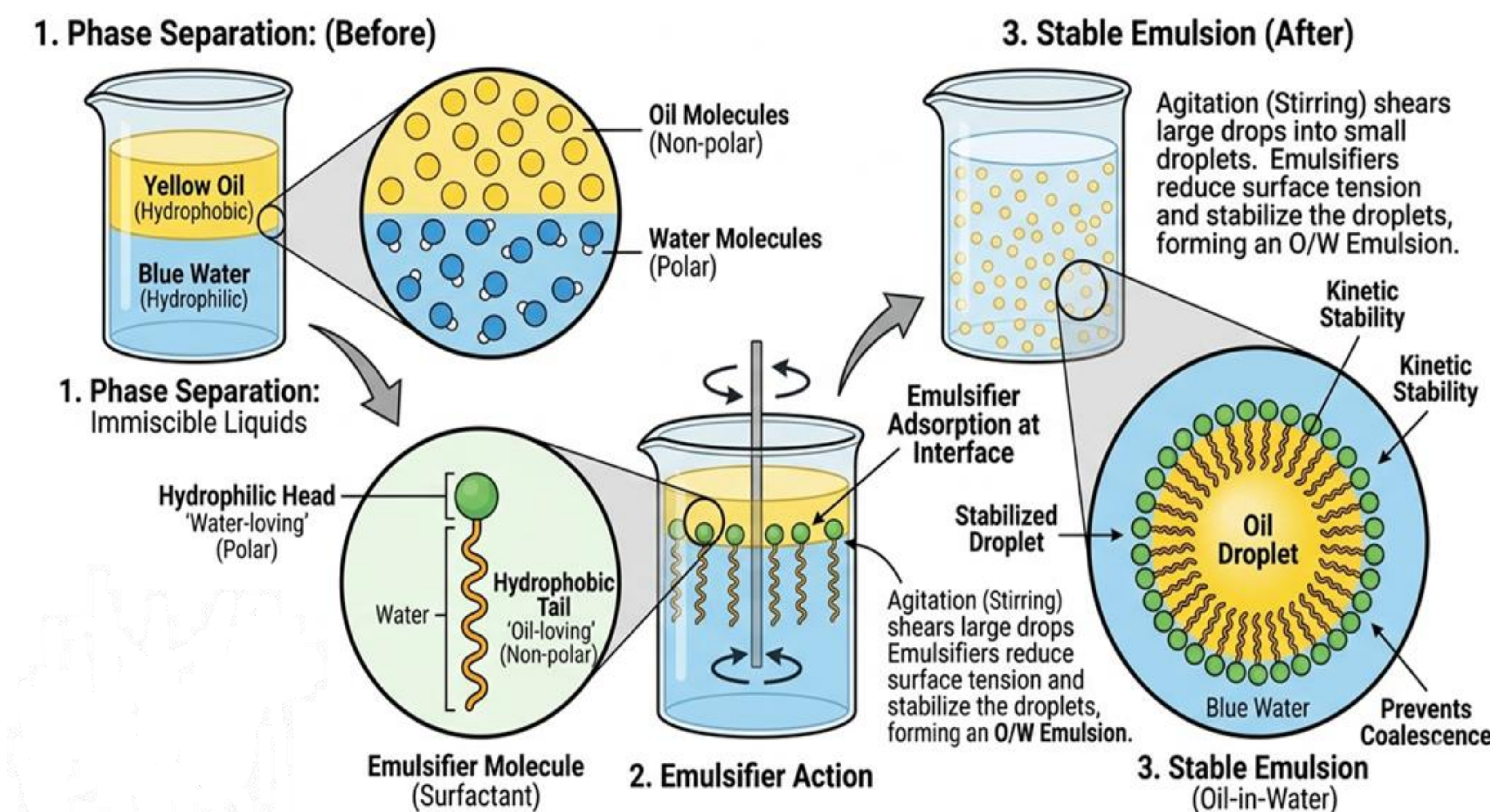


Overview



Experimental Section

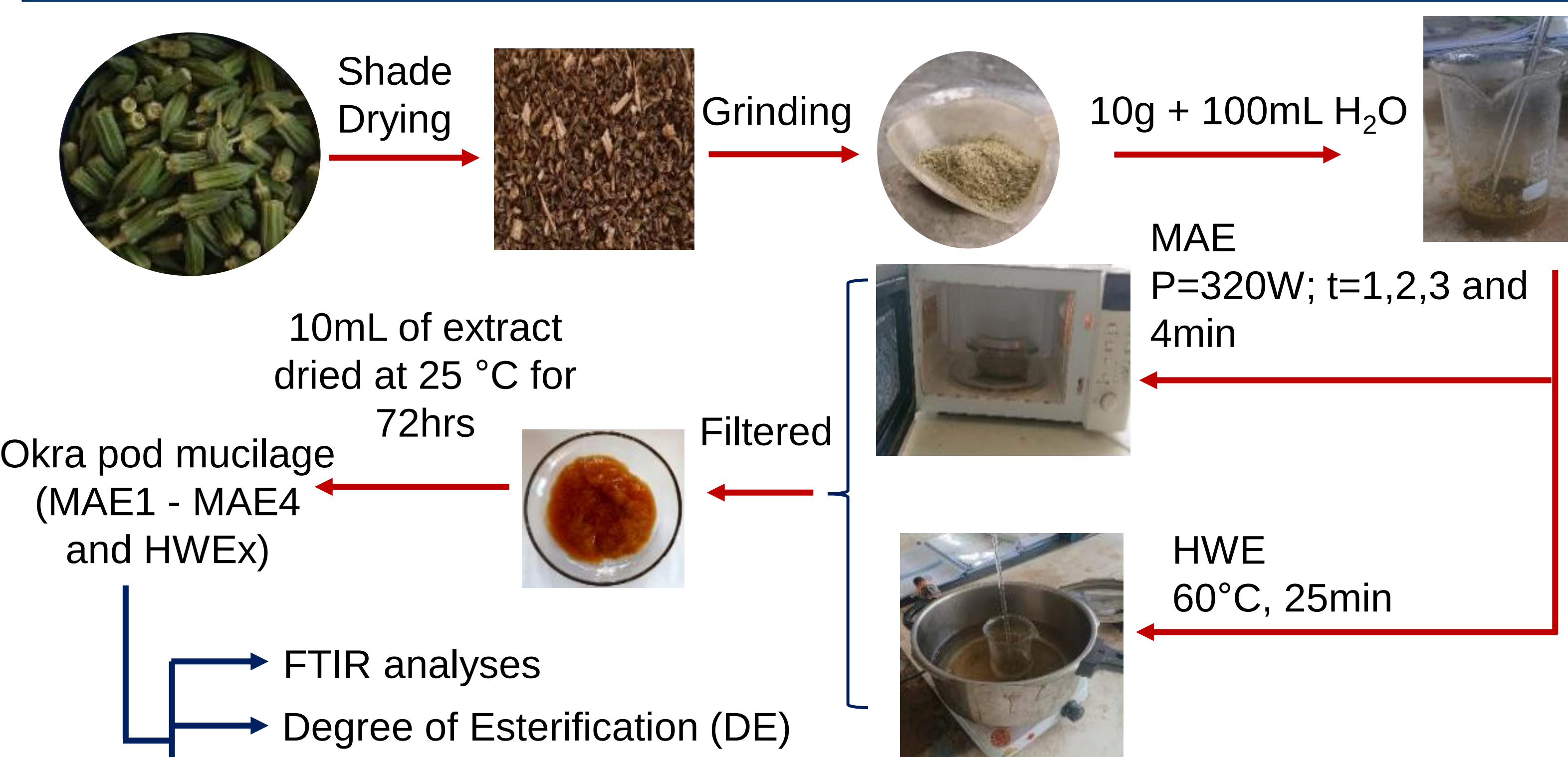


Fig. 1: Okra pod mucilage preparation protocol

*MAE = Microwave assisted extraction; HWE = Hot water extraction; MAE1-MAE4 = Microwave extract at 1-4min; HWEx = Hot water extract

Results



Fig. 2: Dried OPM.

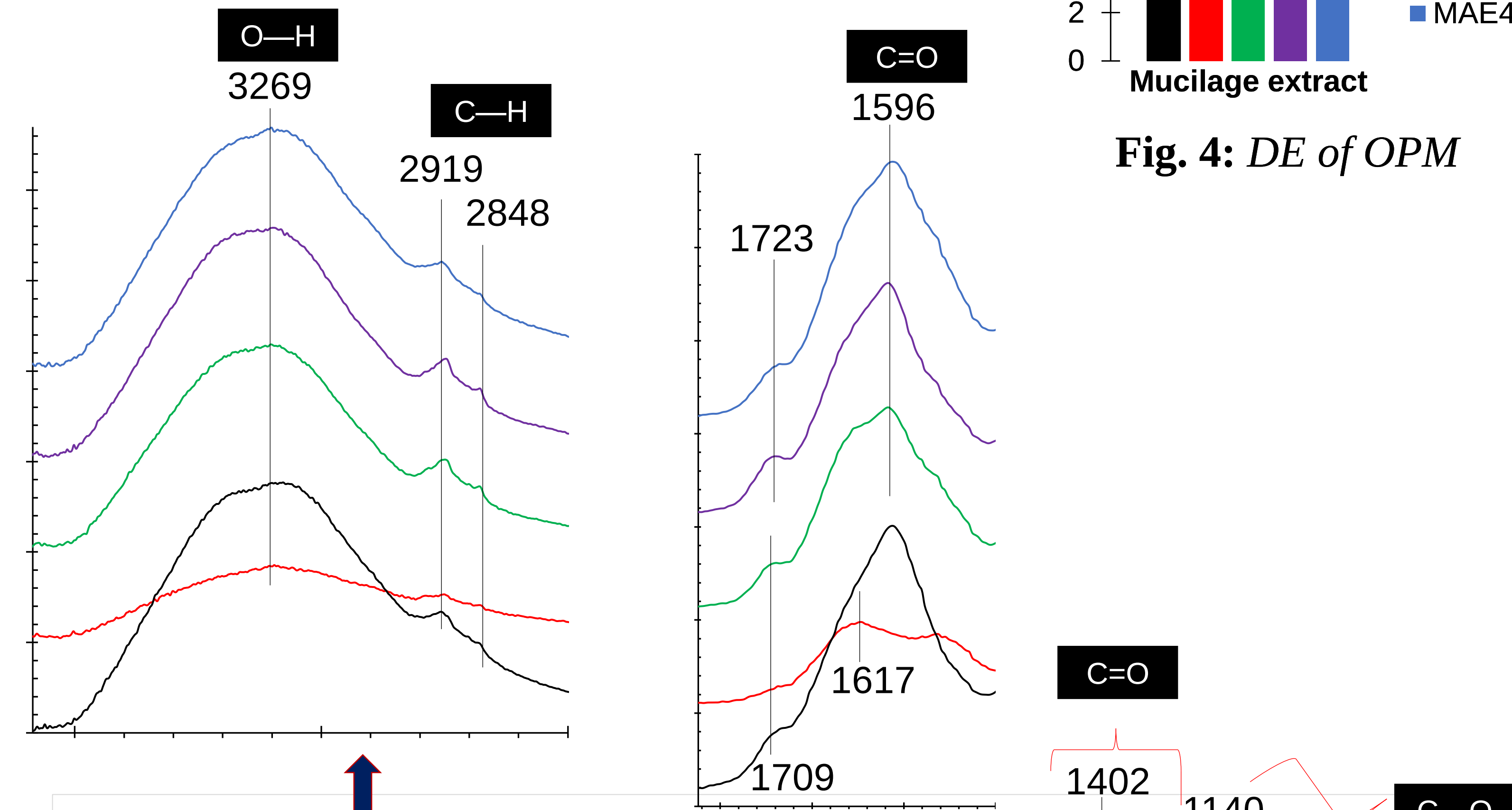


Fig. 3: FTIR spectra of OPM

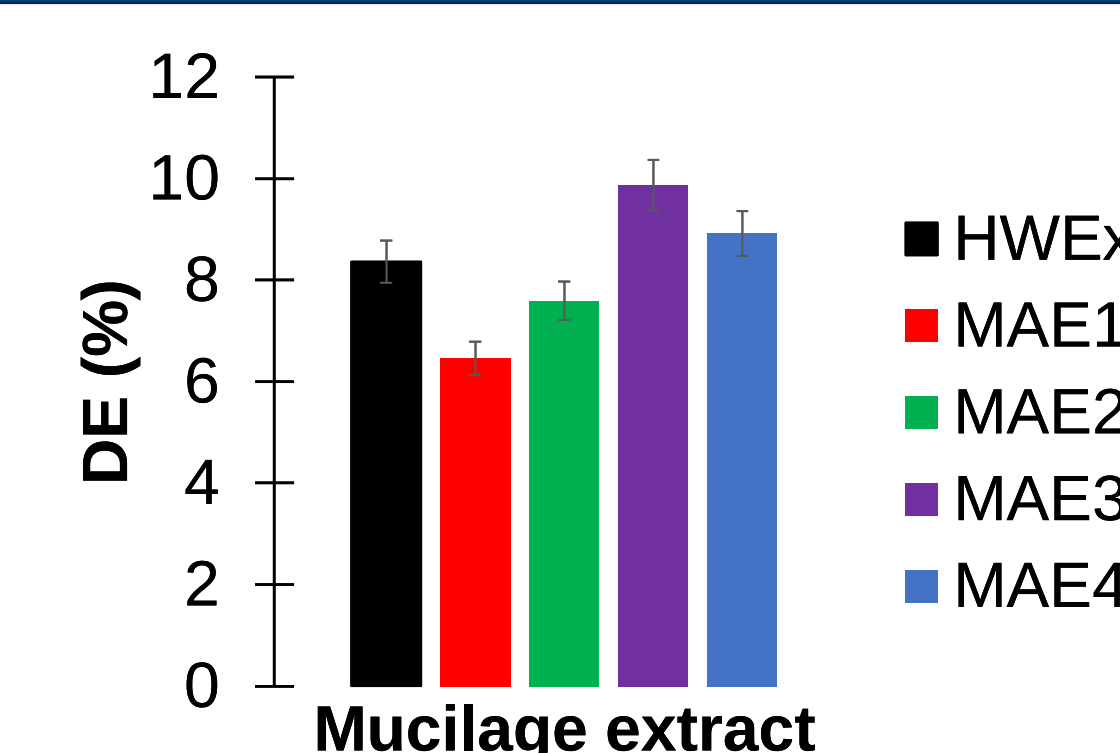
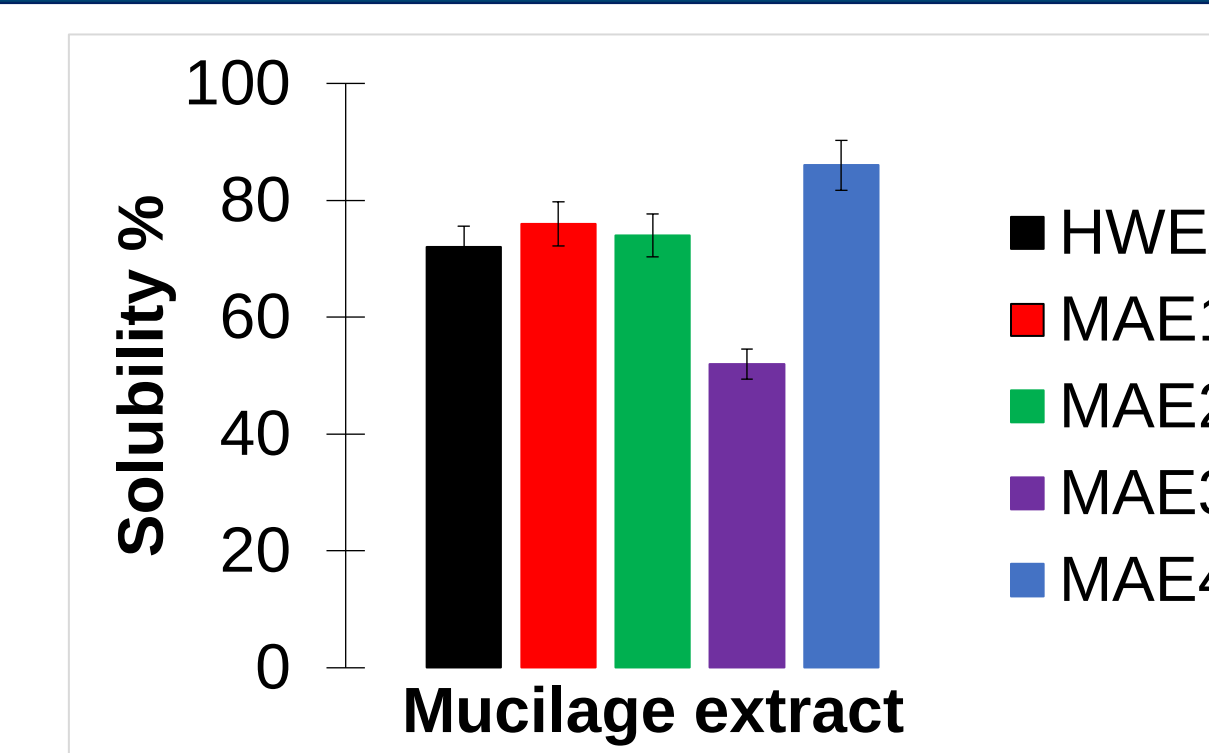
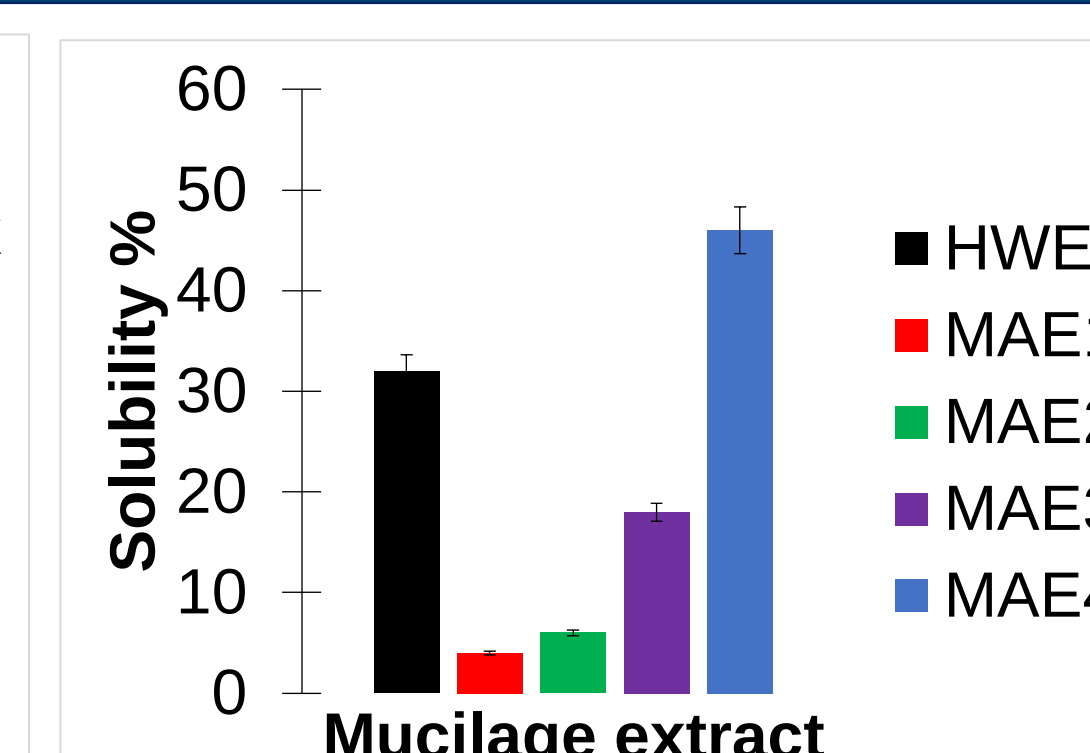


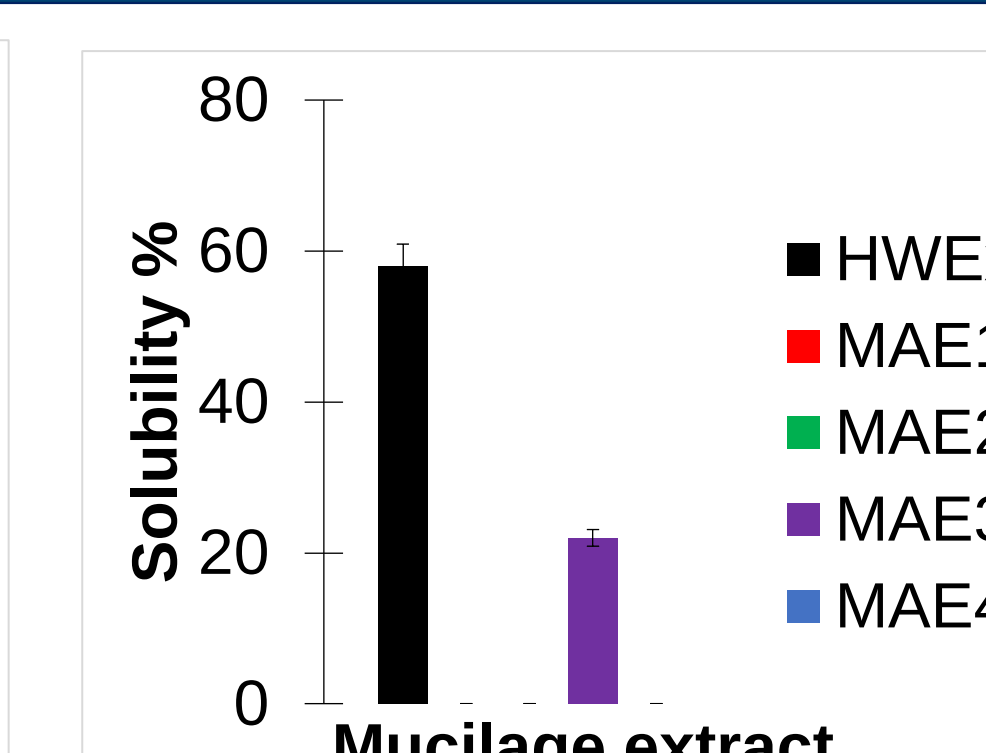
Fig. 4: DE of OPM



In distilled water

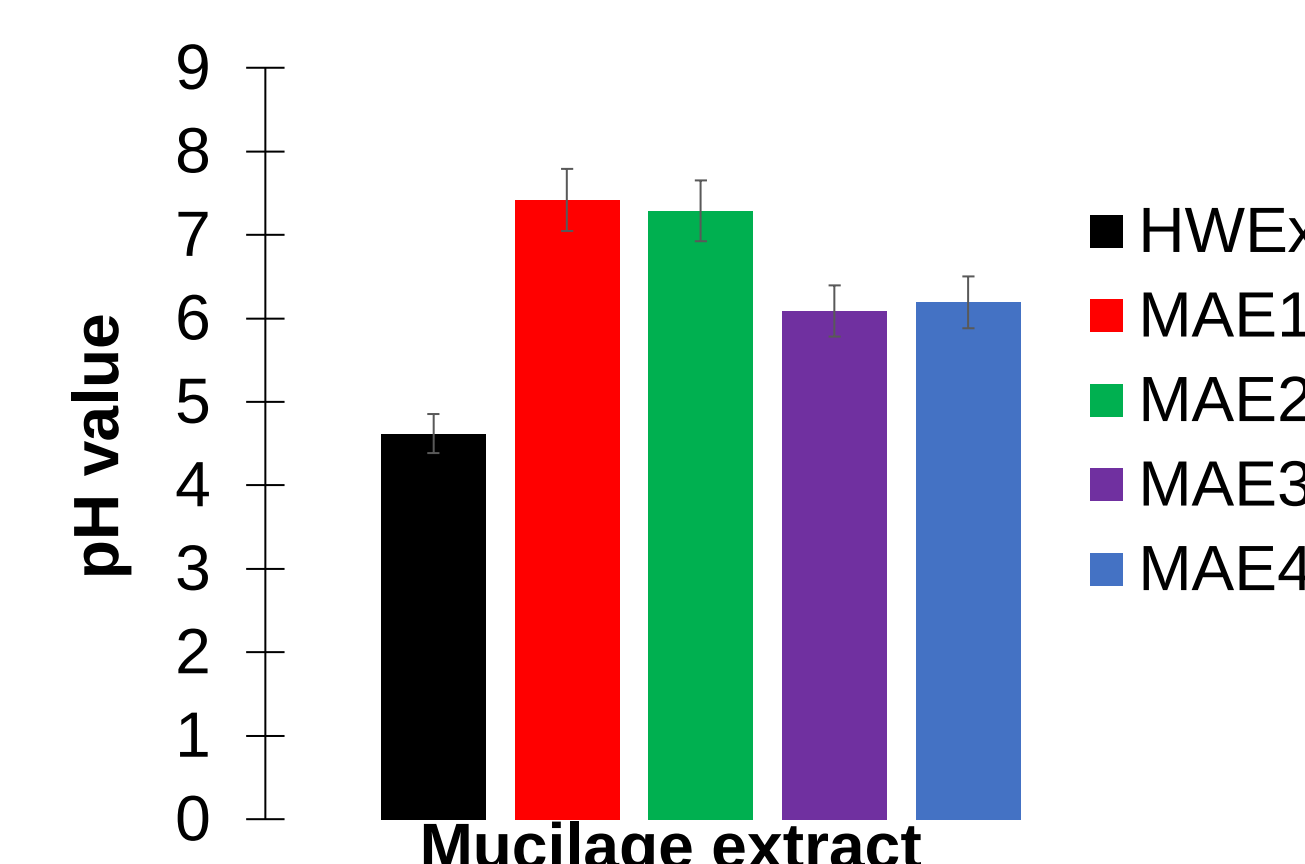


In ethanol

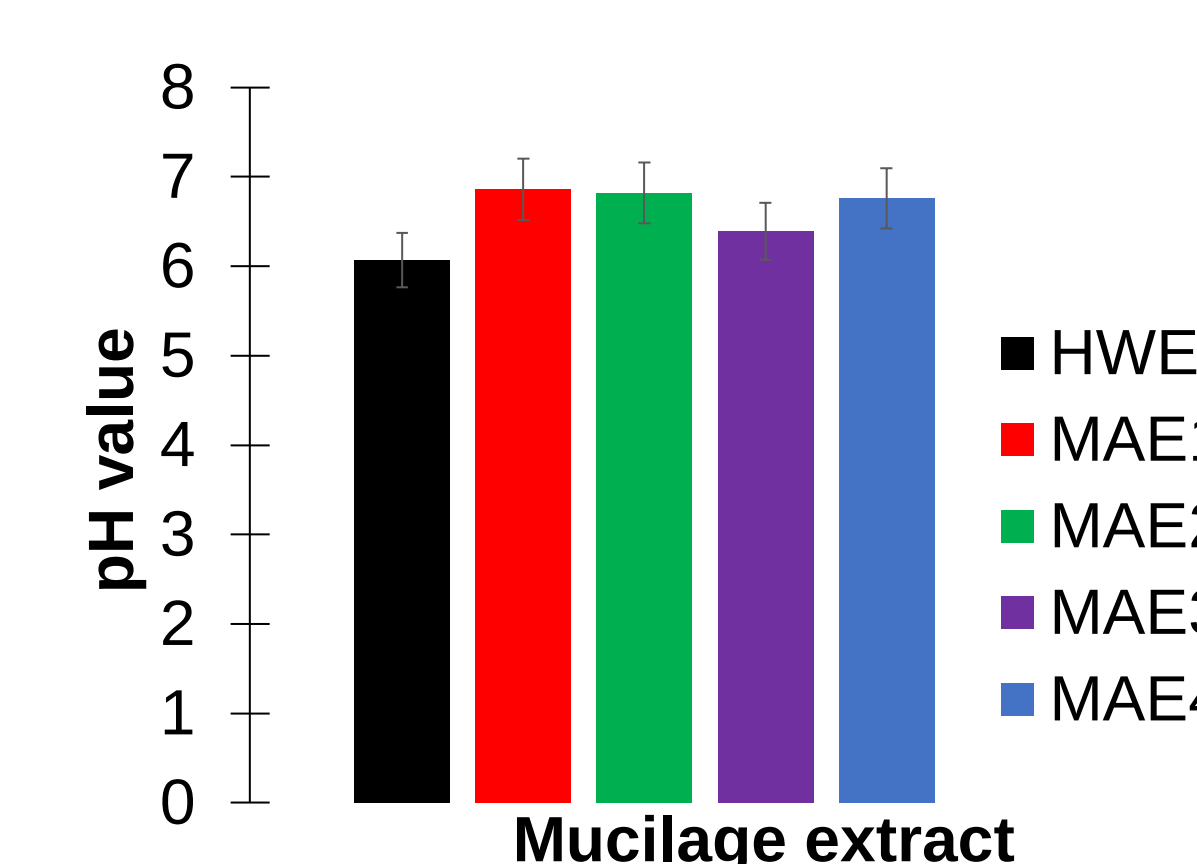


In DMSO

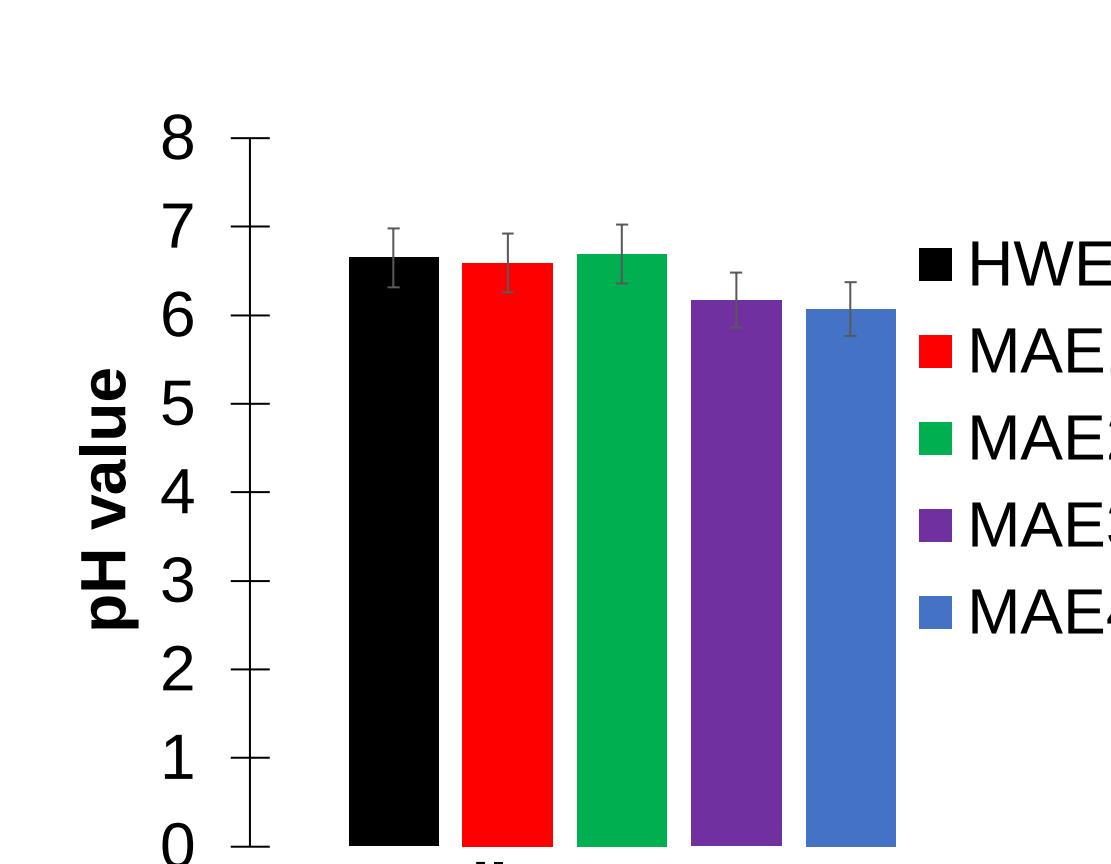
Fig. 5: Solubility % of OPM



In distilled water



In ethanol



In DMSO

Fig. 6: pH of OPM solutions

Conclusion

The prepared OPMs had different colours.

The observation of FTIR spectra revealed structural and DE variations as the microwaving time is increased.

The prepared OPMFs were of different solubility in the polar solvents used.

The different OPMFs exhibited different pHs in the polar solvents tested.

Further work

Carry out complementary structural, thermal and functional analyses on the prepared extracts. .

Identify possible co-emulsifiers that could strengthen the emulsifying action of OPMs.