**Supporting data 4 (S4)**

Emulsions, before mixing(A,B), directly after mixing (C,D), after storage for 6 weeks at room temperature (E,F and F1,F2) of:

* paraffin oil,
* rapeseed oil,
* Vaseline oil.

The whole samples were prepared without any preservation additives. For that reason in some samples some contaminations (possible microbiological contaminations from the air) were observed i.e. Fig. 2F1 (dark rash). No further investigations were performed according the contamination. Nevertheless, any rule and dependence between sample preparation, stabilizer concentration and presence of contaminations were observed.

It should be noticed that obtained emulsions were characterized by with smooth color, indicating homogeneity of obtained system. What is more, the quality of the emulsion, evaluated visually, was higher, when filtered extract were used. It can suggest, that for the emulsion stability the nanometric fraction of the extract is responsible. The macroscopic observations of the emulsions shown no significant differences in their appearance. This aspect is very important when the expected product of the cosmetic or food industry (containing emulsion) should be attractive to the consumer.

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Fig. 1 Paraffin oil O/W emulsion A, C, E with stock solution of mullein extract as a stabilizer, B, D, F with filtered (through syringe filter 0.22µm) stock solution of mullein extract as a stabilizer.

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Fig. 2 Rapeseed oil O/W emulsion A, C, E with stock solution of mullein extract as a stabilizer, B, D, F1, F2 with filtered (through syringe filter 0.22µm) stock solution of mullein extract as a stabilizer.

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Fig. 3 Vaseline oil O/W emulsion A, C, E with stock solution of mullein extract as a stabilizer, B, D, F with filtered (through syringe filter 0.22µm) stock solution of mullein extract as a stabilizer.