Influence of impeller geometry on hydromechanical stress in stirred liquid/liquid dispersions

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Table S1. Estimated ranges of turbulence parameters.

Impeller	**Abbreviated symbol**	c_D[-]	λ_κ [µm]	$\frac{\Lambda}{\lambda_\kappa}$ [-]	$\frac{d_{32}}{\lambda_\kappa}$ [-]
6 blade-Rushton turbine	RT-d/D=0.6	0.45	26-42	229-367	6.34-7.81
	RT-d/D=0.4	0.45	16-28	257-391	5.40-7.46
	RT-d/D=0.33	0.45	13-21	264-386	5.57-6.06
6 blade-pitched blade turbine	PBT-6 × 45°	0.17	13-22	304-487	5.44-5.99
	PBT-6 × 45°-h/d=0.2	0.17	10-16	347-510	4.91-5.39
	PBT-6 × 22.5°	0.08	10-16	403-609	4.57-5.90
Propeller	PROP-h/d=0.28	0.08	10-16	485-603	4.84-5.37
	PROP-h/d=0.33	0.08	12-16	570-724	5.33-5.91

Table S2. Impeller swept volume V_I, geometrical factor F and flow number Fl for the investigated impellers.

Impeller	V_I **[cm^3]**	F **[-]**	**Fl [-]**
RT-d/D=0.6	136.8	0.361	0.77
RT-d/D=0.4	41.8	0.160	0.81
RT-d/D=0.33	23.8	0.109	0.81
PBT-6 × 90°	28.2	0.124	0.71
PBT-6 × 45°	20.1	0.066	0.92
PBT-6 × 45°-h/d=0.2	16.8	0.059	0.91
PBT-6 × 22.5°	10.8	0.022	0.58
PROP-h/d=0.28	13.9	0.016	0.47
PROP-h/d=0.33	15.6	0.019	0.49
PROPRing-h/d=0.33	18.3	0.020	-
BiLOOP	19.0	0.0935	-
WRI-d/D=0.33-51.2°	56.7	-	-
WRI-d/D=0.4-41.4°	50.8	-	-
WRI-d/D=0.4-28.8°	70.8	-	-