# SUPPORTING INFORMATION

Breastmilk cell and fat contents respond similarly to removal of breastmilk by the infant



**Figure S1.** Inter- and intra-individual variation in breastmilk fat content by study week. The top row shows the feeding breast, whereas the bottom row shows the non-feeding (control) breast. Each repeat/week is indicated with a different line pattern (week one – solid line; week two '----', week three '....', week four '-.-.'). Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.



**Figure S2.** Inter- and intra-individual variation in breastmilk cell content (counts/mL milk) by study week. The top row shows the feeding breast, whereas the bottom row shows the non-feeding (control) breast. Each repeat/week is indicated with a different line pattern (week one – solid line; week two '----', week three '....', week four '-.--.'). Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.



**Figure S3.** Inter- and intra-individual variation in breastmilk cell viability (%) by study week. The top row shows the feeding breast, whereas the bottom row shows the non-feeding (control) breast. Each repeat/week is indicated with a different line pattern (week one – solid line; week two '----', week three '....', week four '----'). Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.



**Figure S4.** Inter- and intra-individual variation in breastmilk protein concentration (g/L) by study week. The top row shows the feeding breast, whereas the bottom row shows the non-feeding (control) breast. Each repeat/week is indicated with a different line pattern (week one – solid line; week two '----', week three '....', week four '-.--.'). Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.

#### fat concentration, by breast



**Figure S5.** Inter- and intra-individual variation in breastmilk fat content by breast type. The top row shows the right breast, whereas the bottom row shows the left breast. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.

#### cell counts, by breast



**Figure S6.** Inter- and intra-individual variation in breastmilk cell content (counts/mL milk) by breast type. The top row shows the right breast, whereas the bottom row shows the left breast. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.

# cell viability, by breast



**Figure S7.** Inter- and intra-individual variation in breastmilk cell viability (%) by breast type. The top row shows the right breast, whereas the bottom row shows the left breast. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.

# protein concentration, by breast



**Figure S8.** Inter- and intra-individual variation in breastmilk protein content (g/L) by breast type. The top row shows the right breast, whereas the bottom row shows the left breast. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.





**Figure S9.** Inter- and intra-individual variation in breastmilk fat content by expression type. The top row shows the pump expressions, whereas the bottom row shows the hand expressions. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.

#### cell counts, by expression type



**Figure S10.** Inter- and intra-individual variation in breastmilk cell content (counts/mL milk) by expression type. The top row shows the pump expressions, whereas the bottom row shows the hand expressions. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.

# cell viability, by expression type



**Figure S11.** Inter- and intra-individual variation in breastmilk cell viability (%) by expression type. The top row shows the pump expressions, whereas the bottom row shows the hand expressions. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.

protein content, by expression type



**Figure S12.** Inter- and intra-individual variation in breastmilk protein content (g/L) by expression type. The top row shows the pump expressions, whereas the bottom row shows the hand expressions. Each column represents one participant (N=6). Pre: sample collected immediately pre-feeding; post: sample collected immediately post-feeding.