Abstract PO-0585 Table 1 Raw/LTLT/Lyophylized HM

HM	Raw (n = 22)	LTLT (n = 22)	Lyophylized (n = 18)
Total Lipids (g/l)	32,17*	31,31	30,87*
Fatty Acids%			
Myristic	**7.05**	**7.01**	**7.08**
Palmitic	23,38	23,25	23,49
Oleic	30,79	31,24	31,14
Linoleic	9,27	9,26	9,28
linolenic	0,86	0,86	0,87
Arachidonic	0,39	0,39	0,41
DHA	0,24	0,24	0,26
Trans	0.92*	0.91	1*

* p < 0.05

Background Donor human milk (HM) was associated with slower growth in the early postnatal period. The macronutrient concentrations of HM could be influenced by the various processes used in human milk bank. The LTLT pasteurisation was known to slightly decrease protein and fat content of HMB. But The effect of the lyophilization was not described.
Aims To Compare the lipids compositions between raw/LTLT/lyophilized HM.
Methods This is a monocentric of 22 batches independent prospective study on HM. After Folch extraction, Total fat was determined gravimetrically. The fatty acid (FA), after direct transesterification, were separated by capillary gas chromatography with BPX 70 column. Statistical analysis were: appiried t test and/or T of Wilcoxon.
Results
Conclusion Decrease of the fats was mainly observed after pasteurisation: difference (d=0.86 g/l) (p = 0.05, after Bonferroni correction it is non significant); the lyophylization preserved almost total lipids after LTLT (d=0.26 g/l NS). But the total effect of LTLT then lyophylization was a loss of 1.10 g/l of total lipids and significant. There was no significant difference between each of the fatty acids with both processes. LTLT Pasteurisation is not an optimal decontaminating HM process and we have to develop new techniques.

PO-0586 HYPERALIMENTATION AND PLASMA LEVELS OF AMINO ACIDS IN VERY PRETERM INFANTS DEPENDENT ON PARENTERAL NUTRITION

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Background The standardised, concentrated with added macronutrients parenteral (SCAMP) nutrition regimen provides hyperalimentation to very preterm infants (VPI). Current neonatal parenteral nutrition (PN) amino acid (AA) formulations predate recent recommended protein intakes. AA were categorised as essential, conditionally essential (in VPI) and non-essential. We hypothesised hyperalimentation would prevent low plasma levels of conditionally essential AA (CEAA).
Methods Infants (<1200 g; <29 weeks) were randomised to start SCAMP or remain on control before day 5. Daily parenteral (AA) and enteral protein intakes were calculated from daily nutritional data. Plasma AA levels were measured weekly in PN-dependent infants by ion-exchange chromatography.
Results Infants were randomised to SCAMP (n = 74) and control (n = 76) groups. The mean difference (95% confidence interval) in total protein intake (g/kg) was 8.7 (6.0–11.5) d1–28. All essential AAs (phenylalanine, lysine, valine, leucine, isoleucine, methionine, threonine, histidine and tryptophan) were within or above the reference range (RR) in both groups. Plasma arginine/cysteine levels (week 2) were below RR in both SCAMP (n = 45) and control (n = 62) infants (Table 1). Plasma cysteine levels (week 3) were below RR in both SCAMP (n = 39) and control (n = 36) infants.
Conclusion Despite hyperalimentation and increased protein intake, PN-dependent VPI remain biochemically deficient in some conditionally essential AAs.

Abstract PO-0586 Table 1 Plasma CEAA levels (nmol/L) in SCAMP (S) and control (C) groups

		Tyrosine	Cystine	Glutamine	Arginine	Proline	Glycine
RR		33–75	55–75	325–800	53–71	141–245	178–248
Week 2	S	59 (34–85)	26 (16–33)	495 (387–560)	41 (25–54)	395 (326–462)[a]	388 (339–452)
Median (IQR)	C	53 (38–67)	25 (17–40)	435 (361–535)	34 (21–45)	323 (270–386)[a]	392 (316–466)
Week 3	S	89 (57–107)	36 (30–49)	544 (401–617)	52 (39–69)	369 (306–452)[b]	434 (405–566)
Median (IQR)	C	56 (47–86)	36 (24–41)	494 (413–562)	47 (29–57)	296 (255–366)[b]	447 (339–528)

[a,b]p <0.05.

PO-0587 NUTRITIONAL MODIFICATION TO DECREASE THE EXTRAUTERINE GROWTH RESTRICTION IN VERY LOW BIRTH WEIGHT INFANTS

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Background and aims Extrauterine growth restriction (EUGR; ≤10th percentile of intrauterine growth expected in accordance with the estimated gestational age) is a common problem in preterm infants. After birth, nutrition in preterm infant is dependent on externally administered nutrition and many preterm infants experience significant energy and nutrition deficits.

We modified our nutrition protocol and evaluated the incidence of EUGR and growth status.
Methods A prospective observational cohort study compared infants ≤1,500 g before (n = 37) and after (n = 50) modification of nutrition protocol. Modification included early starts of macronutrients with higher goal, earlier adding of human milk fortifier and higher goal of daily administered calorie. We evaluated demographics, enteral feeding, growth parameters, laboratory data and discharge outcomes. Differences in subgroups of infants ≤1,000 g and 1,000–1,500 g were also assessed.
Results Modified nutrition protocol reduced the incidence of EUGR at 36 weeks gestational age (GA) (91.8% vs. 66.0%, p = 0.005) and at discharge from NICU (89.1% vs. 56.0%, p = 0.001). EUGR was significantly reduced in infants 1,000–1,500 g and trended toward reduction in infants <1,000 g. Height at