**Supplementary Table 7.** Effects of polydextrose in association with other prebiotic ingredients**.**

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| **Reference** | **Prebiotics** | **Dose** | **Objectives** | **Subjects and main features of the trial** | **Outcomes** |
| Ziegler et al., 2007 [59] | PDX/GOS  (ratio 50:50);  PDX/GOS/LOS (ratio 50:33:17) | 0.4 g/100 mL (PDX/GOS);  0.8 g/100 mL (PDX/GOS/LOS) | To evaluate the effect of 2 different combinations of prebiotic ingredients, at 2 different intake levels on the overall growth and tolerance in healthy term infants up to120 days of age | Double-blind, randomized, controlled, parallel-group, prospective trial. Healthy, formula-fed, term infants assigned to 1 of 3 study formula groups: control group (n = 76), PG4 group (control formula supplemented with 4 g/L of a prebiotic blend, n = 74), or PG8 group (control formula supplemented with 8 g/L of a prebiotic blend, n = 76). One hundred sixty four (58 in the control group, 58 in the PG4 group, and 48 in the PGL8 group) completed the study. Anthropometric measurements were taken at 14, 30, 60, 90, and 120 days of age, and 24-hour dietary recall and 24-hour tolerance recall were recorded at 30, 60, 90, and 120 days of age | There were no statistically significant differences among the 3 formula groups for weight growth rate or length growth rate at any time point. Significant differences in stool consistency were detected among the 3 formula groups at 30, 60, and 90 days of age with the supplemented formula groups having looser stools than the control group. A statistical difference was detected among the formula groups in 3 categories of adverse events: diarrhea (control vs PG4,), eczema (PG4 vs control; PG4 vs PGL8), and irritability (control vs PGL8) |
| Nakamura et al., 2009 [60] | PDX/GOS  (ratio 50:50);  PDX/GOS/LOS | 0.4 g/100 mL (PDX/GOS);  0.4 g/100 mL or 0.8 g/100mL  (PDX/GOS/LOS) | To investigate the effects of two prebiotic blends on the fecal bacterial populations of formula-fed infants during a 28-day feeding period | Double-blind, controlled, 28-day study, healthy term infants received control formula (n = 25) or control formula supplemented with PDX and GOS (PG4, n = 27) or with PDX, GOS, and lactulose (LOS) (PGL4 group, n = 27] and PGL8 group, n = 25]).A parallel breast-fed group (BF, n = 30) was included. Fecal bacterial subpopulations were evaluated by culture-based selective enumeration, quantitative real-time PCR, fluorescence in situ hybridization (FISH) and PCR-denaturing gradient gel electrophoresis | The bacterial community profiles for subjects in the BF, PG4, PGL4, and PGL8 groups that first received formula at a younger age were less stable than the profiles for subjects in the same groups that received formula at an older age, but there was no difference for the control group |
| Ashley et al., 2012 [62] | PDX/GOS  (ratio 1:1);  GOS | 0.4 g/100 mL (either PDX/GOS or GOS alone) | To evaluate growth and tolerance of infants fed formula supplemented with PDX and/or GOS | In this multi-center, double-blind, parallel-designed, gender-stratified prospective study 419 infants were randomized and consumed either a marketed routine cow’s milk-based infant formula (n = 142) or one of two investigational formulas from 14 to 120 days of age. Investigational formulas were supplemented with a prebiotic blend of PDX and GOS (n = 139) or GOS alone (GOS; n = 138). Anthropometric measurements were taken at 14, 30, 60, 90, and 120 days of age. Daily recall of formula intake, tolerance, and stool characteristics was collected during study weeks 1 and 2 and 24-h recall was collected at 60, 90, and 120 days of age | There were no group differences in growth rate from 14 to 120 days of age. Discontinuation rates were not significantly different among study groups. No differences in formula intake or infant fussiness or gassiness were observed. During study weeks 1 and 2 and at 60 days of age stool consistency ratings were higher (i.e. softer stools) for infants in the PDX/GOS and GOS groups versus control and remained higher at 120 days for the PDX/GOS group. The overall incidence of medically-confirmed adverse events was similar among groups |
| Scalabrin et al., 2012 [61] | PDX/GOS | 0.4 g/100 mL | To evaluate the effect of infant formula with PDX and GOS on fecal microbiota and secretory IgA (sIgA) | In this double-blind, randomized controlled study, the formula-fed participants were randomly assigned to receive 1 of the 2 study formulas for a 60-day feeding period: control or the same formula supplemented with prebiotics. Breast-fed infants formed a reference group (BF). Of the 289 participants enrolled, 230 completed the study (control 81, PDX/GOS 78, BF 71). Quantification of fecal bacteria by fluorescent in situ hybridization (FISH) was the primary outcome of the study; secondary outcomes included quantification of fecal bacteria by quantitative real-time polymerase chain reaction (qPCR), stool characteristics, sIgA in feces, anthropometric measures, formula tolerance, and incidence of adverse events | Infants consuming PDX/GOS had softer stools than control at all times. Counts in PDX/GOS were closer to the breast-fed group and were significantly higher than control for total bifidobacteria and *Bifidobacterium longum* at 60 days and *Bifidobacterium infantis* at 30 days. No significant differences were detected between PDX/GOS and control in changes from baseline to 30 or 60 days for sIgA or total bifidobacteria by fluorescent in situ hybridization or qPCR; however, significantly higher changes from baseline were detected between PDX/GOS and control for *B. infantis* at 30 days and *B. longum* at 60days |
| Hicks et al., 2012 [63] | PDX/GOS  (ratio 1:1) | 0.4 g/100 mL | To evaluate calcium absorption in infants fed a formula containing prebiotics and one without prebiotics, and to compare calcium absorption from these formulas with a group of human milk-fed infants | Multi-center, double-blind randomized controlled trial. Healthy term infants recruited prior to 10 weeks of age were fed either a cow milk-based non-prebiotic containing control formula (CF), or the same formula with added prebiotics. A non-randomized human milk (HM)-fed group was used for comparison. Participants consumed either CF or PF for a minimum of 14 days. A dual tracer stable isotope method was used to assess calcium absorption in infants exclusively fed CF (n = 30), PF (n = 25) or HM (n = 19) | Despite lower fractional calcium absorption of CF and PF compared to HM, higher calcium content in both led to higher total calcium absorption compared to HM infants. No significant effect of prebiotics was observed on calcium absorption or other markers of bone mineral metabolism |
| Pärtty et al., 2013 [64] | PDX/GOS  (ratio 1:1) | 600 mg/d ( from day 1 to day 30);  2x600 mg/d (from day 31 to day 60) | To evaluate the impact of early prebiotic and probiotic intervention on preterm infants' well-being, crying, growth, and microbiological programming | Randomized, double-blind placebo-controlled study. Ninety-four preterm infants randomized to receive prebiotics, probiotics (*Lactobacillus rhamnosus* GG), or placebo during the first 2 months of life were followed up for 1 year. Infants were categorized based on the extent of crying and irritability during the first 2 months of life, and their gut microbiota was investigated by means of fluorescence in situ hybridization (n = 66) and quantitative polymerase chain reaction (n = 63) | A total of 27 of 94 infants were classified as excessive criers, significantly less frequently in the prebiotic and the probiotic groups than in the placebo group The placebo group had a higher percentage of *Clostridium histolyticum* group bacteria in their stools than did the probiotic group. There were no adverse events related to related to the study products |
| Luoto et al., 2014 [65] | PDX/GOS  (ratio 1:1) | 600 mg/d ( from day 1 to day 30);  2x600 mg/d (from day 31 to day 60) | To assess if early prebiotic or probiotic supplementation would reduce the risk of virus-associated respiratory tract infections during the first year of life in preterm infants | Randomized, double-blind, placebo-controlled trial conducted with 94 preterm infants. Subjects were allocated to receive oral prebiotics, a probiotic (*Lactobacillus rhamnosus* GG), or placebo (microcrystalline cellulose) between days 3 and 60 of life. The primary outcome in the present study was the incidence of defined viral respiratory tract infections (RTIs) confirmed from nasal swabs by using nucleic acid testing | A significantly lower incidence of RTIs was detected in infants receiving prebiotics or probiotics compared with those receiving placebo. Moreover, the incidence of rhinovirus-induced episodes, which comprised 80% of all RTI episodes, was found to be significantly lower in the prebiotic and probiotic groups compared with the placebo group |