

Webinar Q and A – Dr. Katlyn McGrattan, August 18, 2020

It looks as though it is rice starch used in Enfamil AR that contributes to the thickness, has this been considered in terms of arsenic consumption for infants?

Are there concerns about arsenic levels in AR?

Do the AR formulas thicken with Rice??? I've always assumed that was the thickening agent for those...

These are all great questions that we too have raised within our lab surrounding these results! Enfamil AR does thicken with rice starch; however the manufacturer does not indicate how much rice starch they use. This said, they also use another starch-based thickener in it that is non-rice called Maltodextrin. It is *likely* they use less rice starch than we would use due to the concurrent use of maltodextrin, but in full disclosure that is just speculation. I think the question you all raise is quite interesting as many of the healthcare providers (therapists and physicians) have focused on determining which thickeners we can and cannot add to our infant milk, but not as much on what is in the formulas themselves. So, while I do not have a great clear-cut answer for you I would say this is something worth discussing with your medical teams at an intuitional level to bring their awareness to it and make a determination from there until more research is available! Again, what is important to keep in mind is that we consume small amounts of arsenic in lots of water and foods, and that those scant amounts do not cause systemic issues. This is where understanding the thresholds comes in to play. The American Academy of Pediatrics recommends no more than $\frac{3}{4}$ cups of rice per day as they feel under this threshold is safe, so if AR formula does have rice in it there is also the chance it is so little that it does not cause clinical concern for the carcinogenic implications. All things we need to study more!

How much formula did you mix up at a time for the IDDSI tests? And did you reuse the same 10mL of formula or add it back in to whole formula volume and report every 5 minutes? Also, curious if the formulas were warmed, room temp or cold at testing? Thank you for all your work!!!!

Great question! In the experiments presented in this lecture we would mix a 4 oz bottle of room temperature formula, draw the liquid from the bottom to represent what the infant would receive when the bottle was inverted, and then disposed of that tested formula to represent what happens when an infant expresses the formula. We then ran the next IDDSI test by drawing a new 10mL batch and so on. Once that 30-minute testing period was complete we would then mix a new bottle and follow the same steps to ensure we captured any variation that could occur as a result of slight differences in the amount of formula in the scoop etc. Another part of this study did, however, look at the differences in these results if the formula was mixed in larger volumes (ex. 6, 8, 10 oz bottles) and the impact of refrigerating and warming. Those results are in final stages of preparation for submission and will hopefully be published in the upcoming few months. As for the science, you are very welcome! Keep the questions coming and we will work to help give y'all some answers!

In this current slide, what product was used as the thickener in these 3 studies (this was at the beginning of the webinar)

Based on when this comment came in, I think the slide in reference was the Krummrich et al. 2016 study. In this study they used Simply Thick in 41% of the infants and Thick N Easy in 59%.

What reference are you relying on for the rec of not using Simply Thick for <12 years (or hx of NEC)?

The simply thick recommendations that I discussed are those that are listed on the back of the product and on the Simply Thick website at the time of recording.

Are you using Enfamil AR with preemies? I discussed this idea with our NICU nutritionist, and she seemed to think that we could not recommend this formula for most of our NICU population who typically are transitioned to Neosure for discharge.

Use of Enfamil AR with preemies has varied based on the institution I have worked at. I would say in general it is not the go-to formula that they use in the NICU, but I have certainly had plenty of Neonatologists and Nutritionists utilize it for different cases across different centers.

I have a 10-month-old thickening his water with Gel mix, is it safe? He has Down Syndrome.

Based on the manufacturer recommendations Gelmix can be used in infants if they are >6 lbs. and greater than 42 weeks PMA if they have no history of NEC. They do warn against using it to achieve moderately thick thickness in children <12 mths old due to difficulties in expression from the nipple.