

## CHANGES IN VISCOSITY OF THICKENED MILK PREPARED WITH BARIUM CONTRAST FOR VIDEOFLUOROSCOPIC ASSESSMENT OF SWALLOWING

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**OBJECTIVE:** Videofluoroscopic assessment of swallowing function is a procedure also known as Barium swallow and involves mixing food with Barium sulfate which is a contrast medium that is opaque to X-Rays. Adding contrast to thickened liquids however may change the desired viscosity during the exam. The objective of this study was to evaluate changes in viscosity of thickened milk after adding Barium Sulfate to baby's formula thickened with modified corn starch to nectar, honey and pudding consistencies.

**METHODS:** Three 200ml glasses of milk at 15% (170ml of water and 30g of formula) were prepared. Each mixture was diluted according to Barros, Manzano and Silva specifications (2010) and warmed between 40°C and 44°C. Viscosity was established 4 times for each glass using the Brookfield's viscometer (model DV-E), for calculation of the mixture centipoise (cP). Barium sulfate was added to the mixture (Bariogel 100%) using a 50/50 dilution (100ml thickened formula + 100ml barium sulfate). After warming the mixture, the viscosity was once again established. **RESULTS:** For the nectar consistency a viscosity of 113.5 cP was found for the mixture without the contrast while 794 cP was found for the mixture with the Barium sulfate. According to ADA classification (2002), nectar consistency was not maintained after mixing the thickened formula with the contrast. Desired viscosity for honey and pudding consistency was not modified after adding Barium. **CONCLUSION:** Standardization of food preparation during Barium Swallow exams is important to assure desired consistency and viscosity of the material used during the diagnostic and treatment decision process in management of dysphagia.

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