

of drugs through oral mucosa therefore show the early onset of action. The objective of the study was to develop and evaluate oral jelly formulations of vitamin C. Slurry method was adopted using glucose 103 gm, sugar 67 gm, gelatin 10 gm and sorbitol 6.56 gm. Preformulation studies were performed including the organoleptic profile, pH, and solubility of both drugs. The medicated jelly of Vitamin C was prepared and evaluated for physical characteristics, weight variation, syneresis, pH, taste and palatability, drug content, release rate characteristics and stability studies. All the jellies were found to have patient welcoming taste and were palatable. All formulations showed more than 50% drug release within 15 minutes, while 93% drug was released in 30 minutes. The results of release kinetics showed that the formulation followed the zero-order release kinetics. Thus, the drug was released at constant rate independent of the drug concentration involved in the process. All the medicated jellies were found to remain stable stored for 60 days at different temperatures. The present study revealed that medicated jellies of vitamin C could be employed orally in an effective form as an alternative solid oral dosage form for special population such as pediatrics, geriatrics and patients with dysphagia.

Kendall, R. et al. (2017). "Using the slug mucosal irritation assay to investigate the tolerability of tablet excipients on human skin in the context of the use of a nipple shield delivery system." *Pharm Res* 34(4):687–695.

PURPOSE: Neonates are particularly challenging to treat. A novel patented drug delivery device containing a rapidly disintegrating tablet held within a modified nipple shield (NSDS) was designed to deliver medication to infants during breastfeeding. However, concerns exist around dermatological nipple tolerability with no pharmaceutical safety assessment guidance to study local tissue tolerance of the nipple and the areola. This is the first Slug Mucosal Irritation (SMI) study to evaluate irritancy potential of GRAS excipients commonly used to manufacture rapidly disintegrating immediate release solid oral dosage form **METHODS:** Zinc sulphate selected as the antidiarrheal model drug that reduces infant mortality, was blended with functional excipients at traditional levels [microcrystalline cellulose, sodium starch glycolate, croscarmellose sodium, magnesium stearate]. Slugs were exposed to blends slurried in human breast milk to assess their stinging, itching or burning potential, using objective values such as mucus production to categorize irritation potency **RESULTS:** Presently an in vivo assay, previously validated for prediction of ocular and nasal irritation, was used as an alternative to vertebrate models to anticipate the potential maternal dermatological tolerability issues to NSDS tablet components. The excipients did not elicit irritancy. However, mild irritancy was observed when zinc sulphate was present in blends. **CONCLUSION:** These promising good tolerability results support the continued investigation of these excipients within NSDS rapidly disintegrating tablet formulations. Topical local tolerance effects being almost entirely limited to irritation, the slug assay potentially adds to the existing preformulation toolbox and may sit in between the in vitro and existing in vivo assays.

Kramer, R. M. et al. (2013). "Development of a stable virus-like particle vaccine formulation against Chikungunya virus and investigation of the effects of polyanions." *J Pharm Sci* 102(12):4305–4314.

Chikungunya virus (CHIKV) is an alphavirus that infects millions of people every year, especially in the developing world. The selective expression of recombinant