

**COMPATIBILITY OF PARENTERAL NUTRITION FOR BABY  
PREMATURE WITH INJECTION DRUGS IN *INTENSIVE CARE UNIT*  
(ICU)**

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**ABSTRACT**

Parenteral nutrition preparations have 2 formulations, namely 3 in 1 and 2 in 1, 2 in 1 formulation is suitable for mixing parenteral nutrients with injection medications that are given to premature infants. Premature infants require parenteral nutrition therapy and require a variety of medications that will be mixed in the bag or meet the site of Y-site. The meeting Y-site has a risk of incompatibility between two medications administered, drug incompatibility due to physical and chemical reactions. Therefore, the purpose of this research is to know the compatibility of the preparation of parenteral nutrients with injectable medications often used in premature infants. The preparation of parenteral nutrition is tested with 13 drugs widely used in the NICU. The compatibility test by mixing the preparation of parenteral nutrition with direct injection medications, or with a reconstitution dry powder drug with a ratio of 1:1. The analysis of physical changes is observed at hours 0, 1 and 4 hours at 25°C with visual observation, the Tyndal effect, and microscope effects, while chemical analysis is performed with Turbidimetry and PH changes. The results of the study showed the preparation of parenteral nutrition compatible with 10 drugs, namely ampicillin, Fluconazole, Phosphomysin, Gentamycin, Levofloxacin, Metronidazole, Mikamin, Netilmisin, Paracetamol and Siprofloksasin. While it is incompatibilities that occur due to precipitation reactions with marked the existence of particles and crystals, discoloration, turbidity measurement  $\geq 0.5$  and pH change  $\geq 0.5$  namely Claneksi (Co-Amoksiklav), phenytoin and Seftriakson. Physical and chemical compatibility studies 2 in 1 provide the basis for incompatibility is Claneksi (Ko-Amoksiklav), phenytoin and Ceftriaxone. From the results of visual tests, microscope and turbidimetry that parenteral nutrition is incompatibilities with Claneksi drugs (Co-Amoksiklav), phenytoin and Ceftriaxone.

**Keywords:** Compatibility, Parenteral Nutrition, NICU injection drugs.