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Comparison of heavy metal levels in the fish oil obtained from the janitor fish (*Pterygoplichthys disjunctivus*) from Marikina River and Laguna de Bay using atomic absorption spectrometry**A R Lapuz, Guan A N, Ambay R V and Mendoza J D**
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The study aimed to compare the heavy metal levels in the fish oil obtained from *Pterygoplichthys disjunctivus* of Marikina River and Laguna de Bay. The oil was extracted using wet reduction method yielding 200 ml of the sample and underwent digestion process prior to heavy metal analysis using aqua regia and perchloric acid. The diluted sample was heated in a water bath at 60°C for three hours until a light-colored or clear solution was obtained. The result of the heavy metal analysis using atomic absorption spectrometry proved that the fish oil from Laguna de Bay contains less heavy metals concentration than of Marikina River. Three heavy metals namely cadmium, copper, and lead were below the detection limit which means that their concentrations in the fish oil were too low to cause toxicity if ingested. Lead has a concentration of -0.61333 ppm (Marikina) and -0.55111 ppm (Laguna), implies that its amount passed the standard limit established by the DENR and US EPA. Nevertheless, chromium with a concentration of 7.22569 ppm (Marikina) and 2.28298 ppm (Laguna) was the only metal that exceeded the maximum value of heavy metals that could produce a toxic effect. Findings and results of test analysis of this study conducted in the fish oil of *P. disjunctivus* could provide information as to which source of fish oil has a low concentration of heavy metals. Thus, it was proved that *P. disjunctivus* oil from Laguna de Bay could be an alternative source of fish oil.

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Investigation of effect of medium on volumetric and ultrasonic studies of pharmaceutical excipients**Bushra Naseem**
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In designing and development of drug products from active drugs, some of the important non-therapeutic substances, termed as excipients, are essentially included. The most important part of a medicine is constituted by its excipients, which have the important functions of guaranteeing the dosage, stability and bioavailability of the active principle. Various excipient interactions e.g. with active drug component and packing material, etc., may render the excipient harmful for use in formulation. In order to avoid the use of incompatible excipients and to assure that the excipients are safe and stable for use in the designing of the formulation, various stability testing procedures are carried out. Studies of drug-excipient compatibility represent an important phase in the pre-formulation stage for the development of all dosage forms. Sugars such as xylitol, sorbitol, etc., are being used as an alternative low calorie sweetener and well accepted in formulations of various confectioneries and healthcare products. In the present work, intermolecular interactions of pharmaceutical excipients (D-sorbitol and xylitol) in water and binary solvent mixture of water and organic solvent (DMSO) have been investigated using an easy approaching volumetric and acoustic method. Binary solvent mixtures of different molar ratios help to explore the effect of different mediums on various volumetric and acoustical parameters like apparent and partial molar volume, thermal expansion coefficient, partial molar expansibility, Hepler's constant, compressibility factor, intermolecular free length, relative association and hydration number have been calculated using density and sound velocity data of pharmaceutical excipients in binary solvent mixture at different temperatures (293.15 K-313.15 K). Results give an insight about various physical and chemical interactions that an excipient molecule can undergo in biological system along with an active drug product. Presently, positive apparent molar volume and decrease in intermolecular free length with increasing excipient concentration is an indicative of strong intermolecular interactions.

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