# VARIATIONS OF MIXING MILKFISH (*Chanos chanos*) BONE FLOUR IN NOODLE MAKING FROM PHYSICAL PROPERTIES ORGANOLEPTIC PROPERTIES AND CALCIUM CONTENT

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## ABSTRACT

**Background:** Adult humans need calcium intake of 500–800 mg/day, calcium is needed for various important functions in the body such as the formation of bones and teeth. Utilization of milkfish bone waste as a source of calcium and phosphorus is an alternative in order to provide a nutrient-rich food source while reducing the negative impact of environmental pollution. Milkfish bone can be made into flour and used for mixing in food products. Milkfish bone meal every 100 grams contains 27.88% protein, 7.85% fat, 51.42% ash and 7.36% carbohydrates, and 11.99% calcium. Noodles are a very popular food by everyone. Noodle products are facing rapid changes and mixing wheat flour as the main ingredient with other flours in addition to increasing nutritional value.
**Objective:** To obtain variations in the mixing of milkfish bone meal on physical properties, organoleptic properties and calcium content of noodles
**Methods:** This research is a pure experimental study with a simple randomized design. There were 4 treatments with the ratio of wheat flour and milkfish bone meal 100%: 0%, 97.5%: 2.5%, 95%: 5%, 92.5%: 7.5%. Physical properties test data were analyzed descriptively, organoleptic test using the Kruskall Wallis test and continued with the Mann Whitney test, calcium levels using the One way ANOVA test and continued with the Duncan test.
**Result:** The more milkfish bone meal was added to the noodles, the color (yellowish white +++), aroma (langu), taste (slightly savory), and texture (less chewy). Calcium content in noodles ranges from 0.25% - 0.55%.
**Conclusion:** There is an effect of mixing variations of milkfish bone meal on physical properties, organoleptic properties and calcium levels

**Keywords:** Noodles, Fish Bone Flour, Physical Properties, Organoleptic Properties, Calcium Levels

# VARIASI PENCAMPURAN TEPUNG TULANG IKAN BANDENG *(Chanos chanos)* PADA PEMBUATAN MIE DITINJAU DARI SIFAT FISIK SIFAT ORGANOLEPTIK DAN KADAR KALSIUM

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## ABSTRAK

**Latar Belakang:** Manusia dewasa membutuhkan asupan kalsium 500–800 mg/hari, kalsium dibutuhkan untuk berbagai fungsi penting dalam tubuh seperti pembentukan tulang dan gigi. Pemanfaatan limbah tulang ikan bandeng sebagai sumber kalsium dan fosfor merupakan salah satu alternatif dalam rangka menyediakan sumber pangan kaya gizi sekaligus mengurangi dampak buruk pencemaran lingkungan .Tulang ikan bandeng dapat dibuat menjadi tepung dan dimanfaatkan untuk campuran dalam produk makanan. Tepung tulang ikan bandeng setiap 100 gram mengandung protein 27,88%, lemak 7,85%, abu 51,42% dan karbohidrat 7,36%, dan kalsium 11,99%. Mie merupakan makanan sangat digemari oleh setiap kalangan. Produk mie menghadapi perubahan pesat dan pencampuran tepung terigu sebagai bahan utama dengan tepung lainya sebagai tambahan untuk meningkatkan nilai gizi.
**Tujuan:** Diperolehnya variasi pencampuran tepung tulang ikan bandeng terhadap sifat fisik, sifat organoleptic dan kadar kalsium mie
**Metode:** Penelitian ini berupa penelitian eksperimental murni dengan desain rancangan acak sederhana. Terdapat 4 perlakuan dengan perbandingan tepung terigu dan tepung tulang ikan bandeng 100%: 0%, 97,5%: 2,5%, 95%: 5%, 92,5%: 7,5%. Data uji sifat fisik dianalisis dengan cara deskriptif, uji organoleptik menggunakan uji *Kruskall wallis* dan dilanjutkan uji *Mann whitney*, kadar kalsium dengan uji *One way anova* dan dilanjutkan dengan uji *Duncan*
**Hasil:** Semakin banyak penambahan tepung tulang ikan bandeng pada pembuatan mie warna (putih kekuningan +++), aroma (langu), rasa (sedikit gurih), dan tekstur (kurang kenyal). kadar kalsium pada mie berkisar antara 0,25%- 0,55%.
**Kesimpulan:** Terdapat pengaruh variasi pencampuran tepung tulang ikan bandeng terhadap sifat fisik, sifat organoleptik dan kadar kalsium

**Kata Kunci:** Mie, Tepung Tulang Ikan, Sifat Fisik, Sifat Organoleptik, Kadar Kalsium