

KARAKTERISTIK FISIKOKIMIA DAN SENSORIS MI GARUT (*Maranta arundinacea*) DENGAN PENAMBAHAN DAUN KELOR (*Moringa oleifera*) SEBAGAI PANGAN RENDAH INDEKS GLIKEMIK

INTISARI

Lonjakan kadar insulin dalam darah yang terus-menerus terutama akibat konsumsi makanan yang indeks glikemik tinggi dapat menyebabkan resistensi insulin dan akhirnya berisiko tinggi mengarah pada diabetes tipe 2. Oleh karena itu, penting untuk mengembangkan produk pangan dengan indeks glikemik rendah yang dapat membantu mengendalikan lonjakan kadar insulin. Penelitian ini bertujuan menganalisis sifat fisik (warna, kekuatan tarik, daya serap air, *cooking time*, *cooking loss*), sifat kimia (proksimat, total gula, kadar pati, aktivitas antioksidan), sensoris, dan indeks glikemik mi kering berbahan umbi garut dan daun kelor untuk mengatasi permasalahan lonjakan kadar glukosa darah yang dapat mengakibatkan diabetes. Perlakuan yang diujikan yaitu mi garut dengan penambahan daun kelor 0%, 2%, 4%, 6%, dan 8%. Hasil uji fisik yaitu penambahan daun kelor yang semakin tinggi dapat menurunkan kecerahan, kekuatan tarik, dan *cooking loss* mi, serta dapat meningkatkan warna hijau, daya serap air, dan *cooking time* mi. Hasil uji kimia yaitu penambahan daun kelor yang semakin tinggi dapat meningkatkan kadar abu, lemak, protein, total gula, dan antioksidan mi, serta dapat menurunkan kadar air, dan kadar pati. Penilaian keseluruhan pada perlakuan 2% daun kelor memperoleh skor 5,10, yang menunjukkan bahwa secara keseluruhan mi garut pada konsentrasi ini lebih disukai dan diterima dibandingkan konsentrasi lain 4,72 (4%), 4,16 (6%), serta 4,18 (8%), meskipun masih berada dalam kategori "netral" hingga "agak suka". Mi kontrol (tanpa penambahan daun kelor) dan mi terpilih (penambahan daun kelor 2%) memiliki nilai indeks glikemik yang termasuk kategori rendah yaitu 34,14 dan 35,33. Kesimpulan, mi berbahan umbi garut dan daun kelor dapat menjadi pangan fungsional yang berpotensi sebagai alternatif pangan bagi penderita diabetes.

Kata kunci: daun kelor, diabetes, indeks glikemik, mi kering, umbi garut

PHYSICOCHEMICAL AND SENSORY CHARACTERISTICS OF GARUT NOODLES (*Maranta arundinacea*) WITH THE ADDITION OF MORINGA LEAVES (*Moringa oleifera*) AS A LOW GLYCEMIC INDEX FOOD

ABSTRACT

Continuous spikes in blood insulin levels, especially due to the consumption of foods with a high glycemic index, can cause insulin resistance and ultimately lead to a high risk of developing type 2 diabetes. Therefore, it is important to develop food products with a low glycemic index that can help control these insulin spikes. This study aims to analyze the physical properties (color, tensile strength, water absorption, cooking time, cooking loss), chemical properties (proximate, total sugar, starch content, antioxidant activity), sensory, and glycemic index of dry noodles made from arrowroot and moringa leaves to overcome the problem of spikes in blood glucose levels that can cause diabetes. The treatments tested were arrowroot noodles with the addition of 0%, 2%, 4%, 6%, and 8% moringa leaves. The results of the physical test were that the higher addition of moringa leaves could reduce the brightness, tensile strength, and cooking loss of the noodles, and could increase the green color, water absorption, and cooking time of the noodles. The results of the chemical test were that the higher addition of moringa leaves could increase the ash, fat, protein, total sugar, and antioxidant content of the noodles, and could reduce the water content, and starch content. The overall assessment of the 2% moringa leaf treatment obtained a score of 5.10, which indicates that overall arrowroot noodles at this concentration are preferred and accepted more than other concentrations of 4.72 (4%), 4.16 (6%), and 4.18 (8%), although still in the category of "neutral" to "rather like". Control noodles (without the addition of moringa leaves) and selected noodles (addition of 2% moringa leaves) have glycemic index values that are included in the low category, namely 34.14 and 35.33. In conclusion, noodles made from arrowroot and moringa leaves can be functional foods that have the potential as an alternative food for diabetics.

Keywords: arrowroot, diabetes, dry noodles, glycemic index, moringa leaves