

MIIEx2017

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Intellectual
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PROGRAMME ABSTRACT

AUTISM

INNOVATION

DESIGN

INVENTION

“Bridging Gaps with Creativity for Future Sustainability”

MIIEX2017



"Bridging the Gaps with Creativity for Future Sustainability"

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BROWNIES FOR ME (BFM)

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UITM SELANGOR KAMPUS PUNCAK ALAM

Abstract

Snack intake for autistic children can be tricky due to the presence of certain food ingredients. High sugar intake is associated with hyperactivity and irritable behaviour in autistic children. High caloric intake, high refined carbohydrate, gluten and dairy intake are the factors contributing to behavior changes in autistic children. Diet restrictions underwent by them may result in inadequate macronutrients and micronutrients intake especially protein, fibre and minerals . The main objective of this innovation, Brownie-for-me (BFM) is to produce lower energy dessert, gluten-free, dairy-free and egg-free brownie for this specific population. Modification and substitution of ingredient had been done to address the nutritional issues. Chocolate based snack was modified as it is *highly preferred by children*. Chocolates is not only delicious, it is a very good source mineral and antioxidant. Excluding dairy and gluten in the diet is another beneficial strategies for autistic children who usually have gut issues. Hence removal of dairy and gluten from their diet may improve social behaviors, cognitive behaviors and speech. Protein and fibre were added to the recipe to improve the nutrients profile of BFM. The gluten-free, dairy-free and egg-free brownies targets to consumers who seek for desert for autistic children and those who require such dietary restrictions such as patients with celiac disease. The uniqueness of BFM is for each serving, it contains up to 40% less calorie, 54% more protein, 40% more fiber, 20% less total fat, and 75% less sugar as compared to commercialized brownies.