



INNOVATION OF THE BISCUITS MADE FROM THE NUTRITIVE-BIO FLOURS AND THE BIOTECHNOLOGICAL EFFICIENCY OF THE PROCESSING

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Abstract: The research work aimed to design and innovate some organic biscuit assortments, from certified organic flours. The experimental results targeted the specific consumption of organic flours: organic Spelt T630 flour, organic white flour T650, organic Spelt 1050 flour, organic whole meal flour, organic multigrain flour. When designing the biscuit assortments, 2 newly created recipes were used. A specific flour consumption between 0.655 -0.667 kg of organic T630, T650 flour/kg of dough was found. It is observed that we have similar specific consumptions.

• Introduction

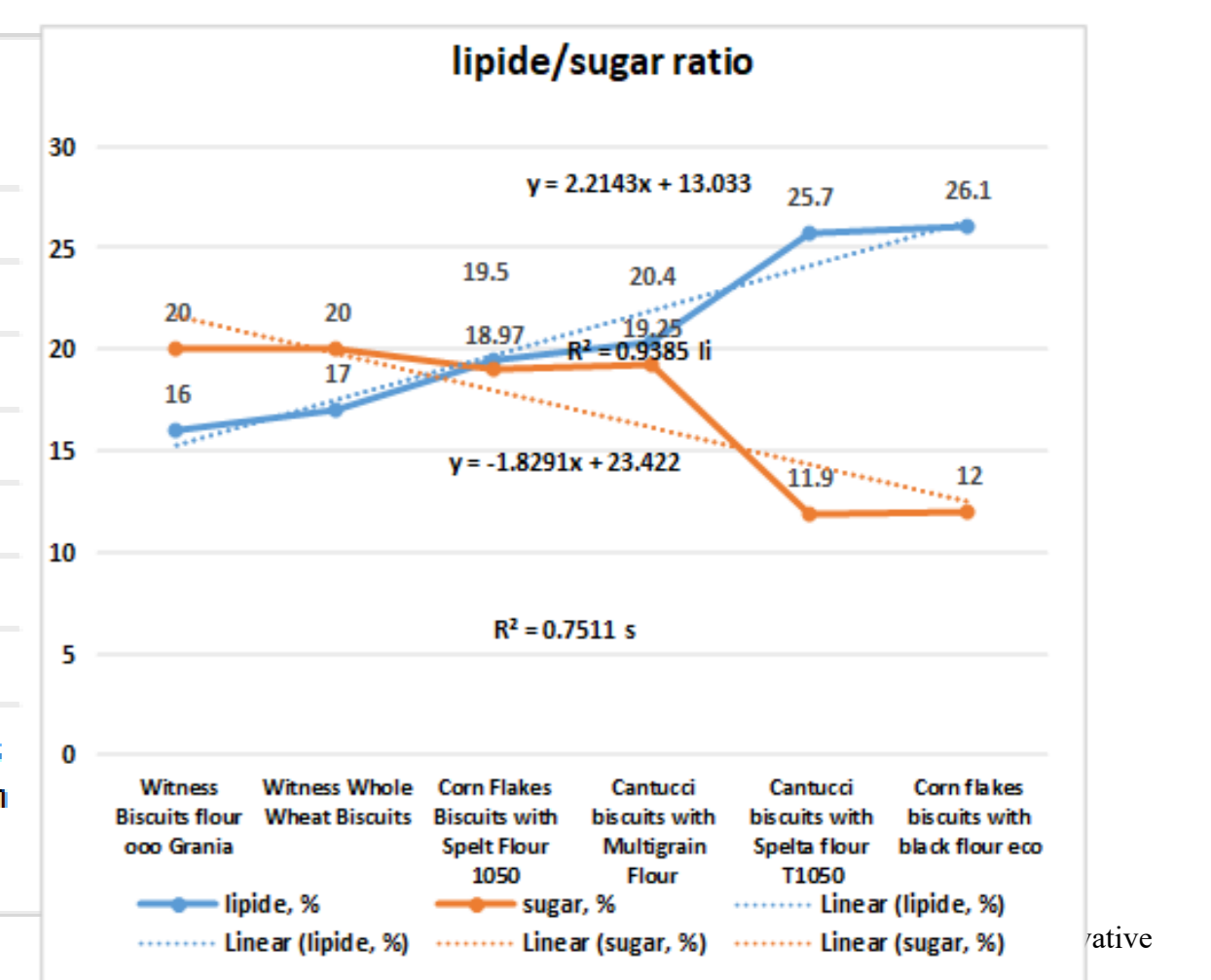
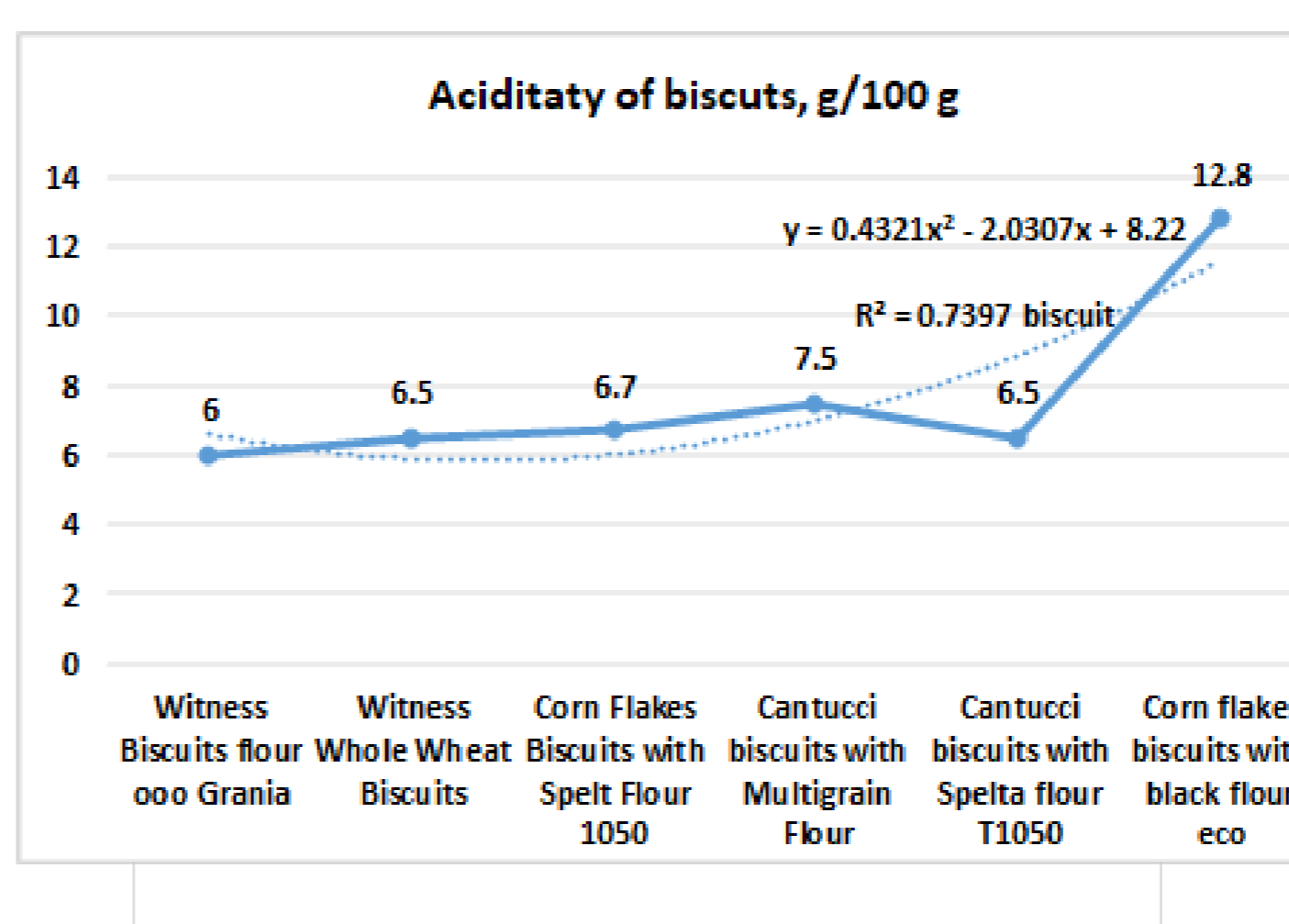
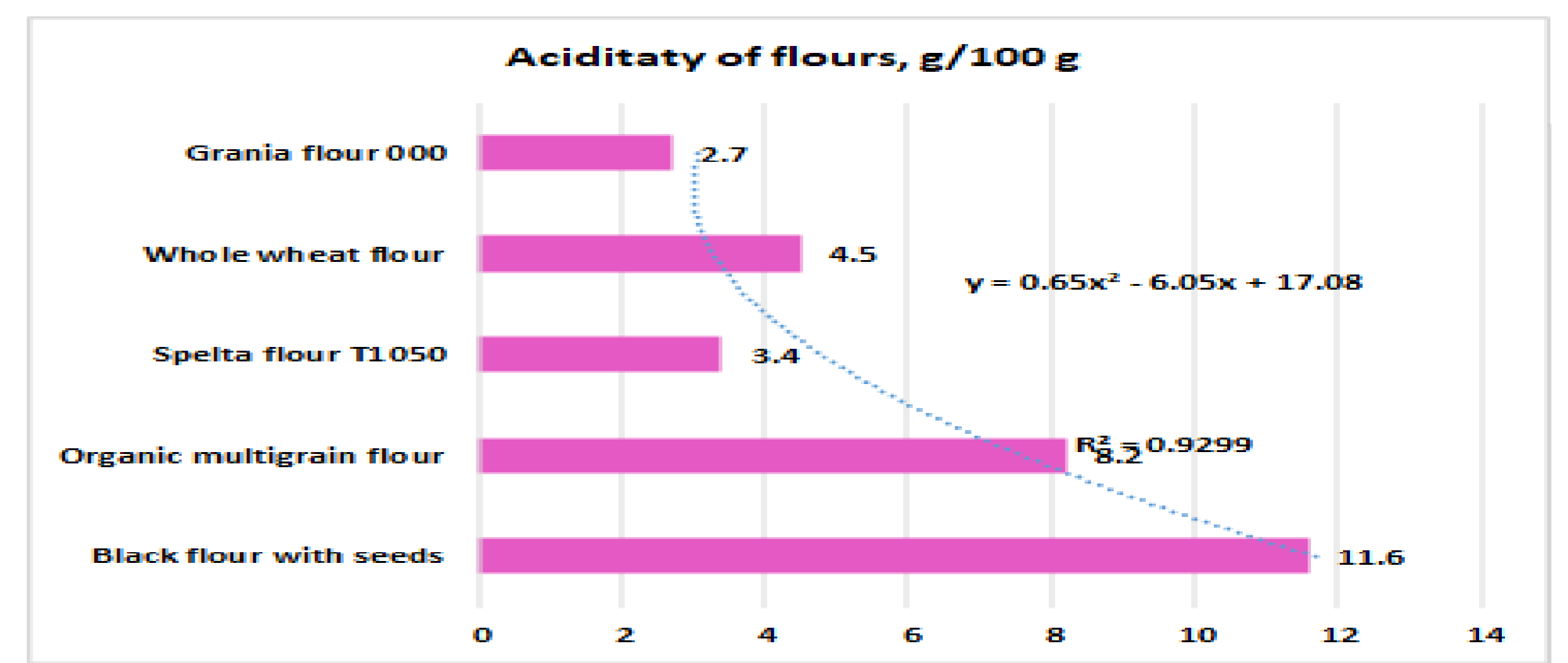
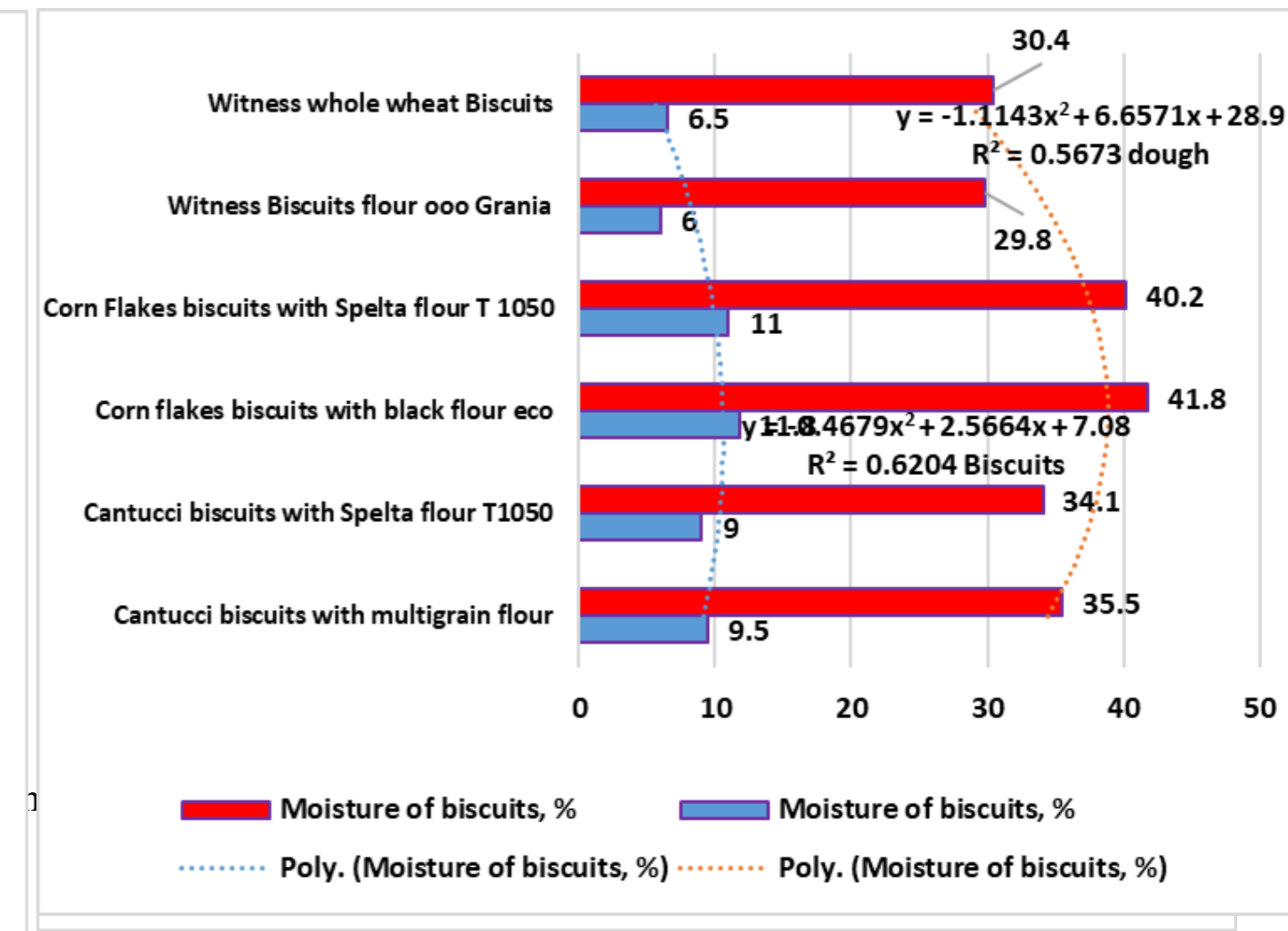
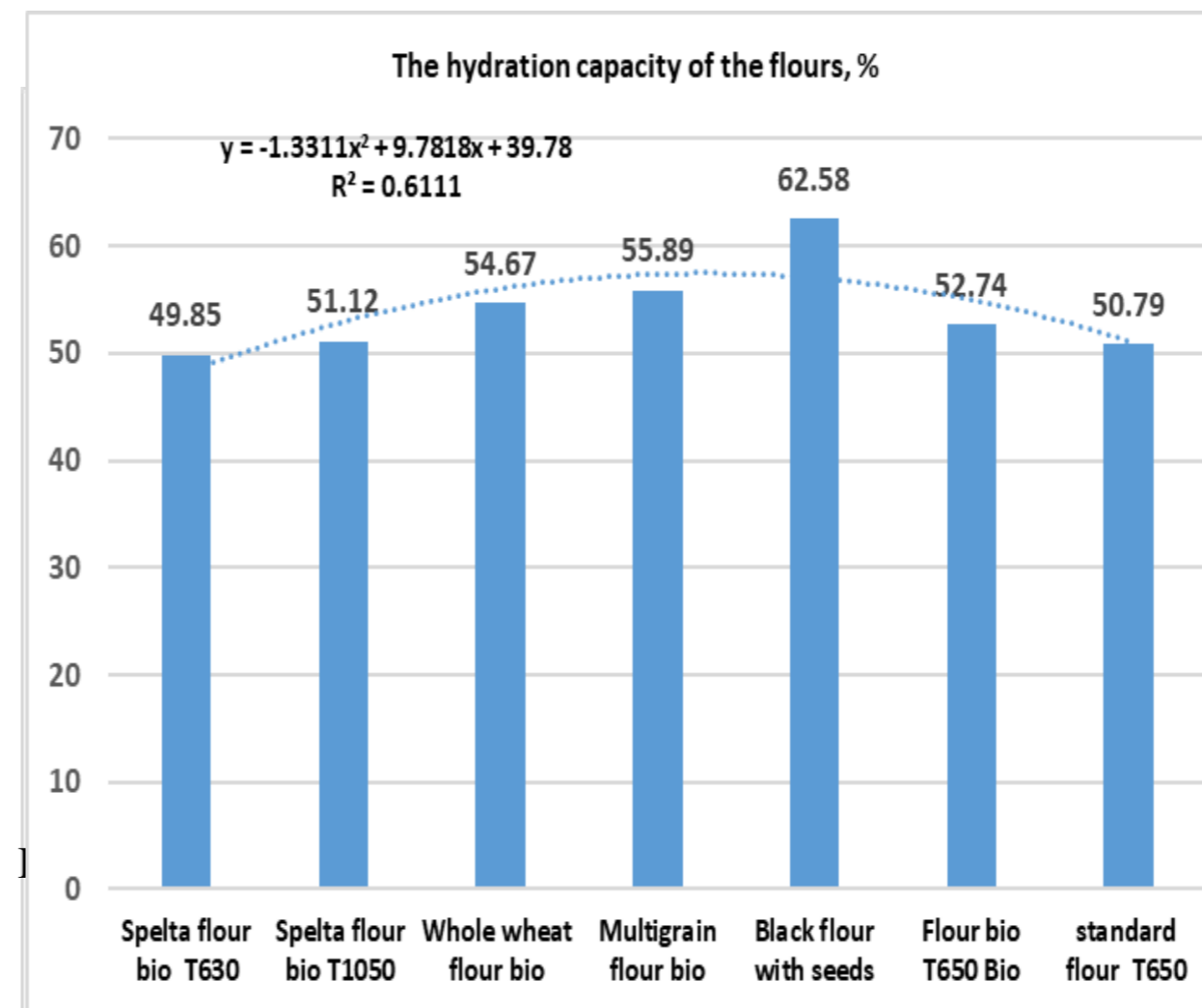
Today, biscuit manufacturing is both globally and nationally a standard industrial process that has been automated, recently using artificial intelligence as well. However, manufacturing recipes use classic ingredients: standard T650 flour, fats like margarine or butter, sugar, naturally identical flavors, sodium and ammonium bicarbonates to provide structure and tenderness to the biscuits. Therefore, in our experimental research, we aimed to use organic flours and nutritious ingredients to obtain biscuits that are nutritious and easy to digest.

• Material and method

The research paper aimed to design and innovate varieties of organic biscuits made from certified organic flours. The raw materials used in the production of Cantucci and Corn Flacks biscuits were: Spelt flour bio T630, Spelt flour bio T1050, Whole wheat flour bio, Multigrain flour bio, Black flour with seeds, Flour bio T650 Bio, Standard flour T650.

The experimental results focused on: analyses of the technological characteristics of the flours, determining the acidity of the flours and the biscuits, the hydration capacity of the flours as a raw material, the moistures of biscuits compared with the moistures of the doughs and the fat-sugar ratio.

• Results and discussions



Conclusions

The hydration capacity of organic flours varied according to their fibre content. This aspect represents a technological and nutritional advantage for consumers. The moisture of the innovative doughs and biscuits was higher than that of the classic products in the range of biscuits obtained from T650 flour. From this, we can say that they require special storage conditions to prevent their spoilage by mould. The acidity of flours and that of organic biscuits is influenced by the type of flour and the ingredients added, such as raisins in Corn Flakes Biscuits and Cantuccini Biscuits. These additions, the raisins, chocolate, cause the biscuits to acquire tendencies toward alkalinity, thus avoiding the production of products with increased acidity levels.

The innovative biscuits have an increased fat content, a significant reduction in sugar, which has a major biotechnological impact on the nutritional quality of the biscuits. The reduction in sugar content is structurally compensated by the added fat, which ensures satiety and slow digestion during their metabolism.