

Healthy Beverages Made from Grape Juice: Antioxidant, Energetic, and Isotonic Components

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Abstract : Consumer tendencies to healthy eating habits and request for organic beverages led to the production of new drinks from fruit juices as a source of nutrients and bioactive compounds. Grape juice is a rich source of sugars, organic acids, and phenolic compounds, which define its beneficial effect on health and the attractive sensory profile for consumers' choices (color, taste, flavor). Thus, grape juice was used as a source of sugars, avoiding the addition of sweeteners by diluting it with mineral water to obtain the sugar concentration recommended for isotonic drinks (6% to 8%) to provide energy during physical activities. In addition, phenolic compounds of grape juice are associated with many human health benefits, mainly antioxidant activity, which helps to prevent different diseases associated with oxidative stress, including cancers and cardiovascular and neurodegenerative diseases. Furthermore, physical exercise has been shown to increase the production of free radicals and other reactive oxygen species. Thus, athletes need to improve their antioxidant defense systems to prevent oxidative damage. Different studies have demonstrated the positive effect of grape juice consumption during physical activities, which improves antioxidant activity and performance, protects against oxidative damage, and reduces inflammation. Thus, the use of grape juice to develop isotonic drinks can provide isotonic drinks with antioxidant and biological activities in addition to their principal role of rehydration and replacement of minerals and carbohydrates during physical exercises. Moreover, attractive sensory characteristics, mainly color, which is provided by anthocyanin content, have a great contribution to making the drinks more natural and help to dispense the use of synthetic dyes in addition to the health benefits which will be a novel product in the field of healthy beverages responding on the demand of consumers for new, innovative, and healthy products.

Keywords : grape juice, isotonic, antioxidants, anthocyanins, natural, sport

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