ABSTRACT

The development of the beverage industry is currently starting to utilizing plant-based ingredients, such as peas. One of the characteristics that every nut has is the presence of off-flavors such as cardboard flavors, beany flavor, and bitter taste. This research tries to increase consumers' preference for pea-based protein beverages with the addition of natural sweeteners. For this reason, research is needed on the character of natural sweeteners that can change the character of pea-based protein beverages to be more preferable. The sweetener used in this study consisted of stevia sweetener (RA80, TS1600, TS7000, TS300, and Eversweet 02) and sucrose as a control. Sweetener testing was carried out sensorily using the Rate-All-That-Apply (RATA) method with untrained panelists. Data were analyzed using ANOVA followed by further Tukey tests. Principal Component Analysis (PCA) was conducted to analyze the rata intensity data. Consumer research data were analyzed using Correspondence Analysis (CA) and Partial Least Squares regression (PLS) using XLSTAT. Through the study, it was found that stevia's natural sweeteners, especially Eversweet 02, can cover the bitter taste, beany taste, and cardboard flavor in pea-based protein beverages and increase panelists' preference.

Keywords: Off-flavor, Peas, RATA, Stevia, Sucrose.

ABSTRAK

Perkembangan industri minuman saat ini sudah mulai memanfaatkan bahan baku nabati, seperti kacang polong. Salah satu karakteristik yang dipunyai setiap kacang-kacangan adalah adanya rasa tidak enak atau off flavors seperti cardboard flavor, beany flavor, dan rasa pahit. Penelitian ini mencoba untuk meningkatkan kesukaan konsumen terhadap minuman protein berbasis kacang polong dengan penambahan pemanis alami. Untuk itu dibutuhkan penelitian mengenai karakter pemanis alami yang mampu mengubah karakter minuman protein berbasis kacang polong menjadi lebih disukai. Pemanis yang digunakan pada penelitian ini terdiri dari pemanis stevia (RA80, TS1600, TS7000, TS300, dan Eversweet 02) dan sukrosa sebagai kontrol. Pengujian pemanis dilakukan secara sensori menggunakan metode Rate-All-That-Apply (RATA) dengan panelis tidak terlatih. Data dianalisis menggunakan ANOVA dilanjutkan dengan uji lanjut Tukey. Principal Component Analysis (PCA) dilakukan untuk menganalisa data intensitas RATA. Data consumer research dianalisis menggunakan Correspondence Analysis (CA) dan Partial Least Squares regression (PLS) menggunakan XLSTAT. Melalui studi diperoleh pemanis alami stevia, khususnya Eversweet 02 dapat menutupi rasa pahit, rasa kacang, maupun cardboard flavor pada minuman protein berbasis kacang polong dan meningkatkan kesukaan panelis.

Kata Kunci: Kacang Polong, Off-flavor, RATA, Sukrosa, Stevia.