Purpose: Wild edible mushrooms play an important role as food and income source for people in a rural area. However, there is still a lack of data on the nutritive value of the wild edible mushrooms traded in Papua. This study was done to collect the information on nutrient composition of the most marketable wild edible mushrooms in the traditional market in the lowland of north Papua.

Methods: Wild edible mushrooms were bought, dried and extracted to analyze their macro and micro nutrient. Proximate composition analysis was based on the Official Analytical Chemists (AOAC) method. Protein content was determined by Micro Kjeldahl methods, P by spectrophotometer, K by flame photometer, Fe, Zn, Ca, Mg, and Cu, by Atomic Absorption Spectrophotometer (AAS). Amino acids composition were analyzed by Reversed-Phase High Performance Liquid Chromatography (RP-HPLC).

Results: There were 4 wild edible mushrooms sold in several traditional market in Papua province: Volvariella volvacea, Volvariella sp, Pleurotus sp, and Lentinus sajor-caju. Ash, fat, protein, carbohydrates and mineral composition were varied among those mushrooms. Volvariella sp (sago mushroom) has the highest protein (52.7 %) and minerals content. From the eighteen amino acids which were determined, each species showed different amino acid profile. Total free amino acid contents range from 131,356.77 mg/kg in Pleurotus sp to 217,139.39 mg/kg in Volvariella volvacea. The most abundant amino acids present in all samples were glutamic acid, aspartic acid, and leusin.

Conclusion: This result indicated that wild edible mushrooms are good nutrients source to overcome nutrient deficiency in the rural area. Further investigation on antimicrobial and antioxidant activity will be conducted to search potential bioactive compounds of wild edible mushrooms from Papua, Indonesia.