

ANTIOXIDANT PROPERTIES (ABTS, FRAP, AND TOTAL PHENOLIC CONTENT) OF COOKED POLLOCK ROE PREMIUM ALASKA POLLOCK ROE WITH NATURAL FERMENTED SEASONING

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ABSTRACT

The distilled water and ethanol extracts raw materials (Alaska Pollock roe), premium Gochujang Pollock roe, and premium fermented seasoning Pollock roe were evaluated for their antioxidant. The total antioxidant property was estimated by 1,1-Diphenyl-2-picrylhydrazyl (ABTS), Ferric Reducing Antioxidant Potential Assay (FRAP Assay), total phenolic content. The all values of ABTS+, FRAP, and total phenolic content scavenging activity of ethanol extract for Pollock roe were higher than those of distilled water extract for Pollock roe. The all values of fermented seasoning Pollock roe were showed the highest inhibition activity of ABTS+, FRAP, and total phenolic content among three treated groups. The 50% inhibition of fermented seasoning Pollock roe on ABTS+ showed much low value ($EC_{50} = 10.02$ ug/ml), followed by Gochujang Pollock roe ($EC_{50} = 10.58$ ug/ml) (Table 4). The EC_{50} value of raw Pollock roe was 12.39 ug/ml. The EC_{50} values of distilled water and ethanol extracts of Gochujang Pollock roe on FRAP were 11.89 ug/ml and 11.43 ug/ml, respectively. The EC_{50} values of distilled water and ethanol extracts of fermented seasoning Pollock roe on total phenolic content were 11.68 ug/ml and 11.42 ug/ml, respectively.

Keywords: Alaska Pollock roe, 1,1-Diphenyl-2-picrylhydrazyl (ABTS), FRAP, total phenolic content.