

Title Development of a non-destructive salt and moisture measurement method in salmon (*Salmo salar*) fillets using impedance technology

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### Abstract

Application of an impedance sensor to determine the salt content, moisture and water phase salt (WPS) of fresh salted Atlantic salmon (*Salmo salar*) fillets was estimated. Three probes with different electrodes geometries were concurrently tested. Whatever the probe used, the salt content of samples was successfully evaluated ( $R^2 > 0.822$ ) by linear prediction models based on conductance and increment capacitance data. WPS was correctly predicted ( $0.732 < R^2 < 0.890$ ) using these same data to determine the prediction model. Nevertheless, the prediction of moisture based only on impedance measurements was not efficient. In this case, adding the sample lipid content in models yielded to better result ( $0.668 < R^2 < 0.757$ ).