

Table 3 - Physical and mechanical properties of agar-based film incorporated with PH or CEO

Properties	Control	PH	CEO
Thickness (mm)	$0.043^b \pm 0.001$	$0.044^b \pm 0.002$	$0.061^a \pm 0.012$
TS (MPa)	$27.46^a \pm 2.78$	$19.89^b \pm 1.81$	$10.16^c \pm 1.02$
EB (%)	$22.24^b \pm 3.55$	$42.70^a \pm 1.38$	$3.93^c \pm 0.15$
WVP ($\times 10^{-8}$) (g mm/ h Pa cm ²)	$1.40^b \pm 0.04$	$3.61^a \pm 0.11$	$3.37^a \pm 0.16$
Solubility (%)	$21.95^b \pm 1.52$	$48.86^a \pm 2.22$	$20.86^b \pm 1.99$
<i>L</i> *	$96.03^a \pm 0.14$	$96.14^a \pm 0.13$	$96.25^a \pm 0.08$
<i>a</i> *	$-0.51^b \pm 0.00$	$-0.61^a \pm 0.02$	$-0.54^b \pm 0.01$
<i>b</i> *	$3.65^b \pm 0.09$	$4.21^a \pm 0.16$	$3.70^b \pm 0.15$
Y (%)	$10.23^b \pm 0.20$	$9.66^b \pm 0.20$	$12.80^a \pm 0.21$
Transparency	$1.57^b \pm 0.06$	$1.55^b \pm 0.06$	$4.87^a \pm 0.09$

Control: Agar-based films without the incorporation of active compounds; PH: films with the incorporation of hydrolysate; CEO: agar-based films incorporated with clove essential oil; TS: tensile strength; EB: elongation at break, WVP: water vapor permeability; *L**: luminosity ranges from 0 (black) to 100 (white); *a**: green-red coordinate (-*a**: green, + *a**: red); *b**: blue-yellow coordinate (-*b**: blue, + *b**: yellow; Y: opacity; Equal letters on the same row indicate that there is no significant difference ($p > 0.05$).