

Table 3 Quality deterioration and microbiological parameters of the smoked catfish treated with bio-preservatives

Parameters	T <sub>1</sub> (Control)	T <sub>2</sub> (Moringa)	T <sub>3</sub> (Ginger)	T <sub>4</sub> (Moringa & Ginger)
PV (meq /kg)	11.68±4.13 <sup>d</sup>	9.23±2.77 <sup>b</sup>	10.14±3.45 <sup>c</sup>	6.10±1.80 <sup>a</sup>
TBAR (mg) (malondialdehyde/kg)	5.03±2.08 <sup>d</sup>	2.91±1.44 <sup>b</sup>	4.28±2.36 <sup>c</sup>	1.64±0.47 <sup>a</sup>
TVB-N (mgN /100g)	24.17±0.42 <sup>d</sup>	16.38±6.67 <sup>b</sup>	20.05±9.36 <sup>c</sup>	13.21±5.73 <sup>a</sup>
TMA-N (mg N/100g)	6.39±4.11 <sup>d</sup>	4.62±3.45 <sup>b</sup>	5.58±3.99 <sup>c</sup>	3.61±2.95 <sup>a</sup>
TVC (x 10 <sup>5</sup> CFU/g)	1.49±1.72 <sup>b</sup>	1.26±1.45 <sup>ab</sup>	1.81±2.09 <sup>b</sup>	0.71±0.82 <sup>a</sup>
Yeast and Mould (× 10 <sup>3</sup> Cfu/g)	2.42±2.53 <sup>b</sup>	0.83±0.86 <sup>a</sup>	1.14±1.20 <sup>ab</sup>	0.09±0.04 <sup>a</sup>

Note: <sup>a-d</sup> means with different superscript along row are significantly different (p<0.05)