

<i>Titill / Title</i>	Seasonal and geographical variation in chemical composition and lipid stability of Atlantic mackerel (<i>Scomber scombrus</i>) caught in Icelandic waters		
<i>Höfundar / Authors</i>	Paulina E. Romotowska ^{1,2} , Magnea G. Karlsdóttir ¹ , María Guðjónsdóttir ² , Sigurjón Arason ^{1,2} , Hordur G. Kristinsson ^{1,3}		
	¹ <i>Matís ohf. / Icelandic Food and Biotech R&D. Vínlandsleið 12, IS-113 Reykjavík. Iceland</i>		
	² <i>University of Iceland, Faculty of Food Science and Nutrition. Vínlandsleið 14. IS-113 Reykjavík. Iceland</i>		
	³ <i>University of Florida, Department of Food Science and Human Nutrition, 359 FSHN Building, Newell Drive, Gainesville, FL 32611, USA.</i>		
<i>Skýrsla / Report no.</i>	17-15	<i>Útgáfudagur / Date:</i>	Desember 2015
<i>Verknr. / Project no.</i>	20022166		
<i>Styrktaraðilar /Funding:</i>	AVS rannsóknarsjóður í sjávarútvegi (R 040-12)		
<i>Ágríp á íslensku:</i>	<p>Á þeim tíma sem makrill er við íslandsstrendur er hann í miklu æti sem veldur því að hann snögg fitnar með þeim afleiðingum að holdið verður mjög viðkvæmt fyrir meðhöndlun. Í þessari rannsókn var makrill sem var veiddur sumarvertíðarnar 2012 og 2013 (júlí, ágúst, september) og frá mismunandi veiðisvæðum (austur, norðaustur, suður og suðaustur) skoðaður. Til þess að meta á hversu vel hráefnið hentar til vinnslu á hágæðaafurðum til manneldis, var makrillinn mældur m.t.t. vatns- og fituinnihalds, fitusýrusamsetningar, litar, þránunar og frírra fitusýra. Almennt var makrillinn sem safnað var sumarið 2012 af betri gæðum en makrill frá 2013. Niðurstöðurnar gáfu einnig til kynna breytileika á milli veiðimánaða m.t.t. fituinnihalds og framgang þránunar. Makrill sem var veiddur um miðbik vertíðarinnar hafði lægsta þránunargildið, sem gefur til kynna að sá makrill hentar best fyrir vinnslu á hágæðaafurðum til manneldis.</p>		
<i>Lykilorð á íslensku:</i>	<i>Makrill; árstíðarbreytileiki; veiðisvæði; efnasamsetning; stöðugleiki fitu</i>		

Report summary

<p><i>Summary in English:</i></p>	<p>Atlantic mackerel (<i>Scomber scombrus</i>) appears in Icelandic waters during its heavy feeding period, resulting in variation in mackerel products quality. Fish caught at different season during the summers of 2012 and 2013 (July, August, September) and at different sites of the Icelandic fishing area (East, Northeast, South and Southeast) were analysed. Measurements of lipid and water content, fatty acid composition, colour changes, lipid hydroperoxide (PV), thiobarbituric reactive substances (TBARS) and free fatty acid (FFA) were studied with the aim of investigating whether this raw material was suitable for the production of high quality products for human consumption. In general, samples collected during the summer of 2012 showed a better condition than fish from 2013. The results indicated seasonal variation in lipid content and rancidity development. The lowest rancidity values were observed in the middle of the Icelandic catching season, indicating that this raw material was best suited for production of high quality products. Moreover, geographical variation of the mackerel catches had an impact on the saturation of the fatty acids, and appeared as follows: East > Southeast > Northeast > South.</p>
<p><i>English keywords:</i></p>	<p><i>Atlantic mackerel, seasonal variation, geographical variation, composition, lipids stability</i></p>