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## **Report summary**

Titill / Title	Comparison of packaging methods for bulk storage of fresh cod loins / Samanburður pakkningalausna í frauðumbúðum við geymslu á þorskafurðum		
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Styrktaraðilar / funding:	Promens Tempra ehf., Umbúðir og ráðgjöf ehf.		
Ágrip á íslensku:	Meginmarkmið tilraunarinnar var að bera saman pakkningalausnir fyrir fisk m.t.t. gæðarýrnunar og vöruhita við geymslu sem líkist aðstæðum við útflutning og dreifingu. Markmiðin voru að bera saman kæligeymslu á vörum pökkuðum (1) í 5-kg einingum í (H1) skipa- eða (H2) flugkössum; (2) í 3-kg einingum í (H3) flugkössum samanborið við H2; (3) með CO2-mottur (H4) til að draga úr örveruvexti í 5-kg einingum geymdum undir 93% vakúm í EPS kössum. Niðurstöður sýna að líftími H1 var styst, en minni gæðabreytingar voru meðal hinna hópanna. Hins vegar var ferskleikinn mestur og líftíminn lengstur hjá H4, sem ber saman við hægari TVB-N og TMA myndun og örveruvöxt vegna CO2-myndunar ásamt lægri vöruhita. Hraðastur örveruvöxtur mældist í H3 eftir 8 daga geymslu. Enginn marktækur munur var milli hópanna m.t.t. TVB-N og TMA gilda, sem voru hæst í H1 og H3. Drip var a.m.k. helmingi hærra í H4 en í öðrum hópum.		
Lykilorð á íslensku:	Pökkun, þorskur, ferskleiki, geymsluþol, gæðarýrnun, útflutningur		
Summary in English:	The overall aim of the storage study was to compare the quality deterioration and temperature profile of cod loins differently packaged in expanded polystyrene boxes and stored under conditions mimicking distribution. The purpose of the study was threefold; to compare chilled storage (1) of 5-kg bulk fish packaged in sea freight (H1) or air freight (H2) boxes; (2) of 3-kg (H3) or 5-kg (H2) bulk fish packaged in air freight boxes; (3) with the use of CO <sub>2</sub> -emitting pads (H4) as a mean to slow down bacterial deterioration of cod loins (5 kg) packaged under partial vacuum and stored in EPS boxes. The results clearly indicated that group H1 had a shorter shelf life as it developed spoilage characteristics faster than the other three groups. Less difference was seen between the remaining three groups but group H4 retained its freshness slightly longer than groups H2 and H3. This can be explained by the CO <sub>2</sub> present and the lower mean product temperature. More advanced microbial spoilage was detected in H3 group compared to H2, as shown by higher microbial counts in H3 being though insignificant. No significant differences were observed after 8-day storage in TVB-N and TMA content of the four groups, despite the higher levels measured in H1 and H3. Drip loss was at least two times higher in H4 than the other groups.		
English keywords:	Packaging, cod, freshness, shelf life, quality deterioration, export		