

Sjávarútvegsráðstefnan 2017
Hörpu, 17. nóvember

SKAGINN 3X

Notkun ofurkælingar á fiski til að minnka þyngd umbúða og kælimiðils

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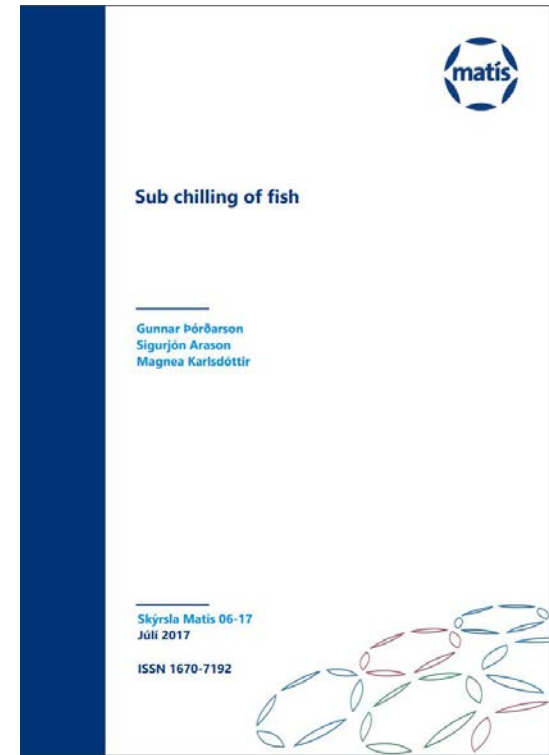


Yfirlit

- SUB-CHILLING™ of fish
 - Styrktarverkefni sem hófst árið 2014
 - Íslaus flutningur um allan heim
- Íslaus flutningur frá Íslandi - Póllands
 - Flutningur í kerjum og EPS kössum
 - Gæðamat
- Íslaus flutningur frá Íslandi - Póllands
 - Flutningur í CoolSeal og EPS kössum
 - Gæðamat

SUB-CHILLING™

- Aðferð til að varðveita ferskleika og gæði hráefnis
- Fiskur kældur niður að frostmarki
 - Lengra geymslupól
 - Eykur gæði
 - Íslaus flutningur



Styrktaraðilar



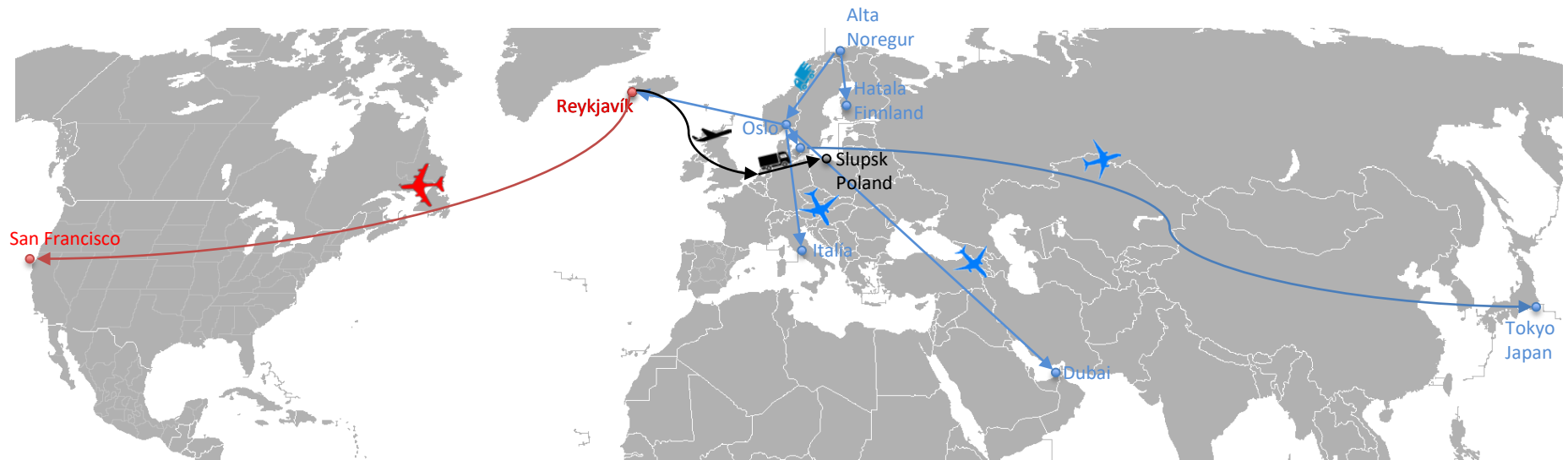
norden

Nordic Innovation

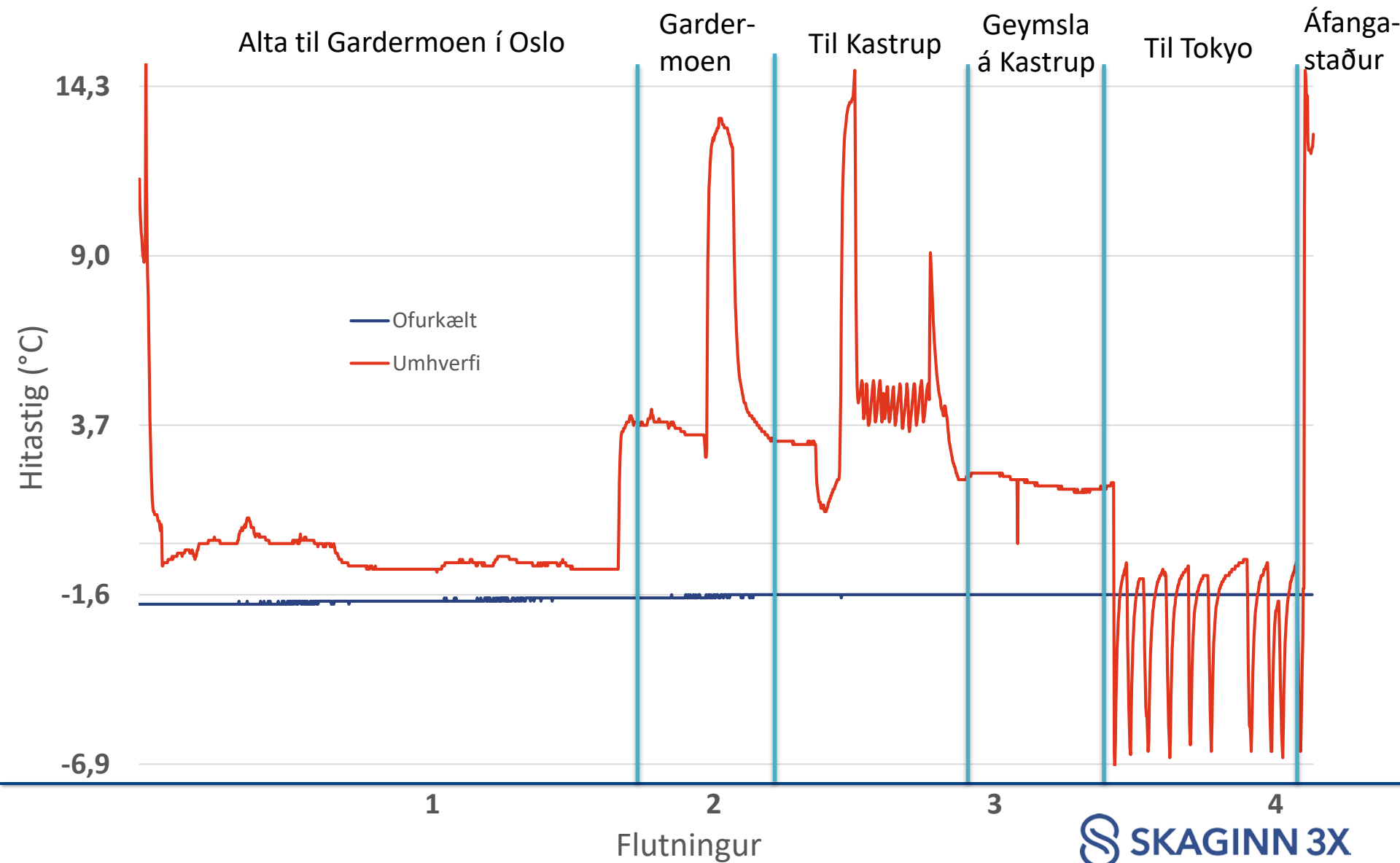
Samstarfsaðilar

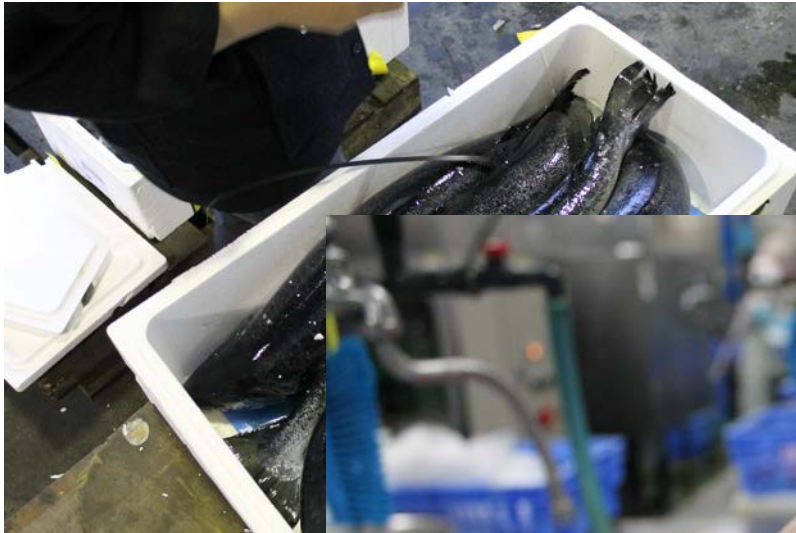


Íslauss flutningur



Íslauss flutningur frá Alta til Tokyo





Flutningur frá Íslandi til Póllands

- Samstarfsverkefni með umbúðaframleiðendum
 - Tilraun 1: Skipaflutningur á ísuðum og ofurkældum regnbogasilungi í kerjum
 - Tilraun 2: Skipaflutningur á ofurkældum regnbogasilungi í kerjum og EPS kössum
 - Hitamælingar
 - Gæðamat
 - Tilraun 3: Skipaflutningur á ísuðum og ofurkældum regnbogasilungi í CoolSeal og EPS kössum
 - Hitamælingar
 - Gæðamat

Samstarfverkefni með Sæplast



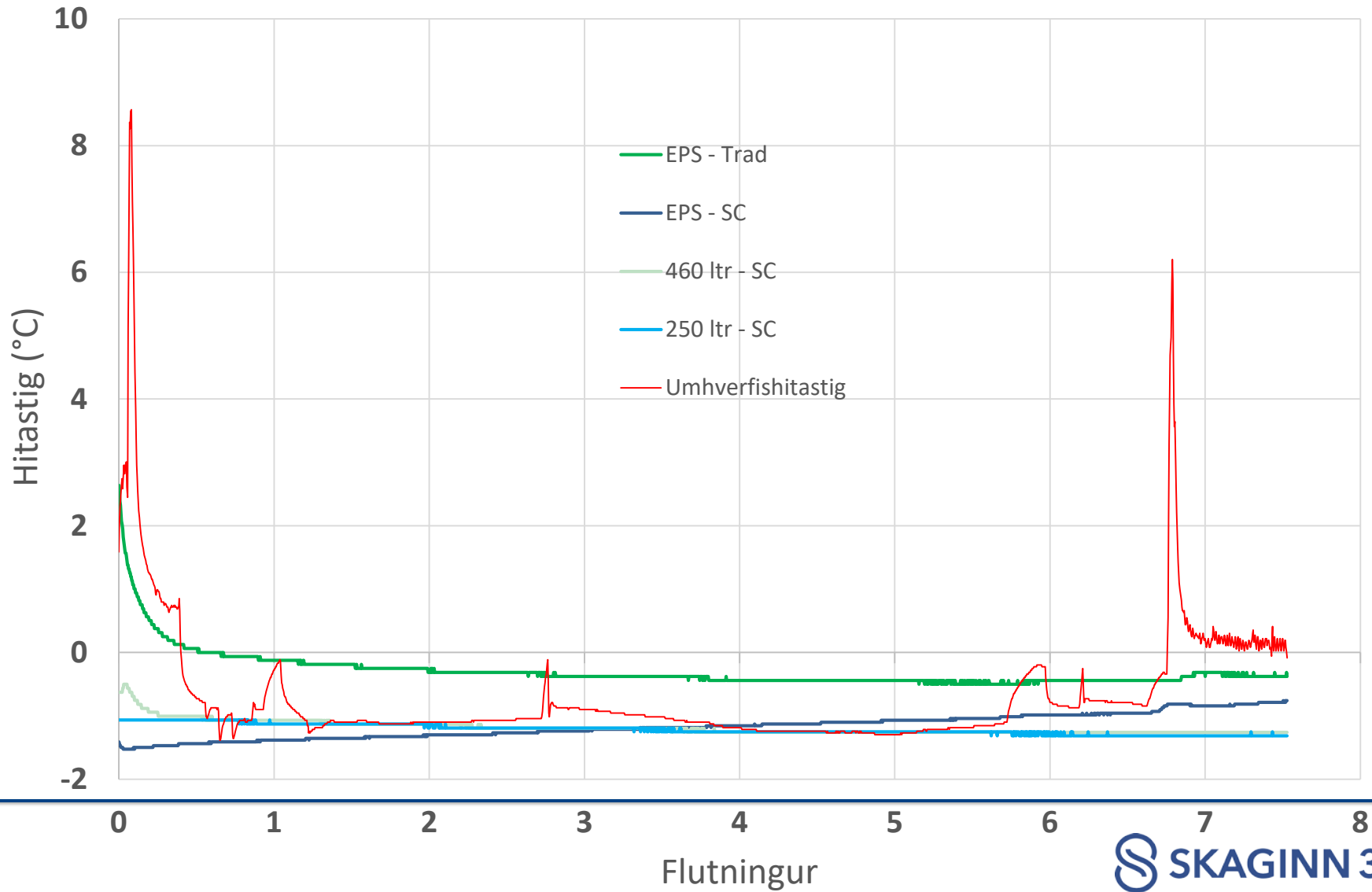
Tilraun 1



Tilraun 2



Kerja og kassa flutningur



Hitastig fyrir og eftir flökun



Gæðamat

Evaluate inelasticity by folding the fillet over on the table, releasing it and observing:

The elasticity in the fish muscle expresses whether the fish muscle can be folded over and then return to its original form. The longer the fish is stored; the fillet will lose elasticity and become more inelastic.

Score	Description
0	→ Elastic: The fillet straightens out quickly
1	→ Somewhat elastic: The fillet straightens out slowly
2	→ Inelastic: The fillet remains folded over



Softness during finger test:

This method expresses softness in the fillet and shall be carried out on a point just under the dorsal fin, as shown in the photos. Press your finger at a 45° angle towards the fillet, with a pressure of approx. 1 kg – preferably with the fillet on balance to apply the correct pressure for two seconds.



Place your finger as such when testing softness.



Score 0 – Firm fillet: The surface is restored a short time after the finger pressure ends.



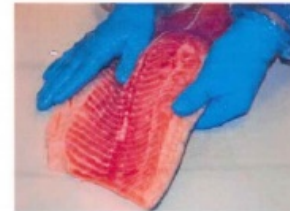
Score 1 – Reduced firmness: The finger pressure leaves a lasting imprint that is not restored.



Score 2 – Soft fillet: The finger goes right through the fillet and causes a clear rupture between the segments.

Gaping

Gaping is evaluated in three zones on the fillet: loin, belly and tail. To provoke gaping, the fillet shall be exerted by breaking it with a certain force. Start in the neck region and fold the loin sideways, as shown on the photos, and then continue along the fillet backwards until you reach the tail. Repeat in the same manner for the belly then evaluate the degree of gaping by comparing the fillet with the photos.



Score table for evaluation of gaping:



Score 0



Score 1



Score 2



Score 3

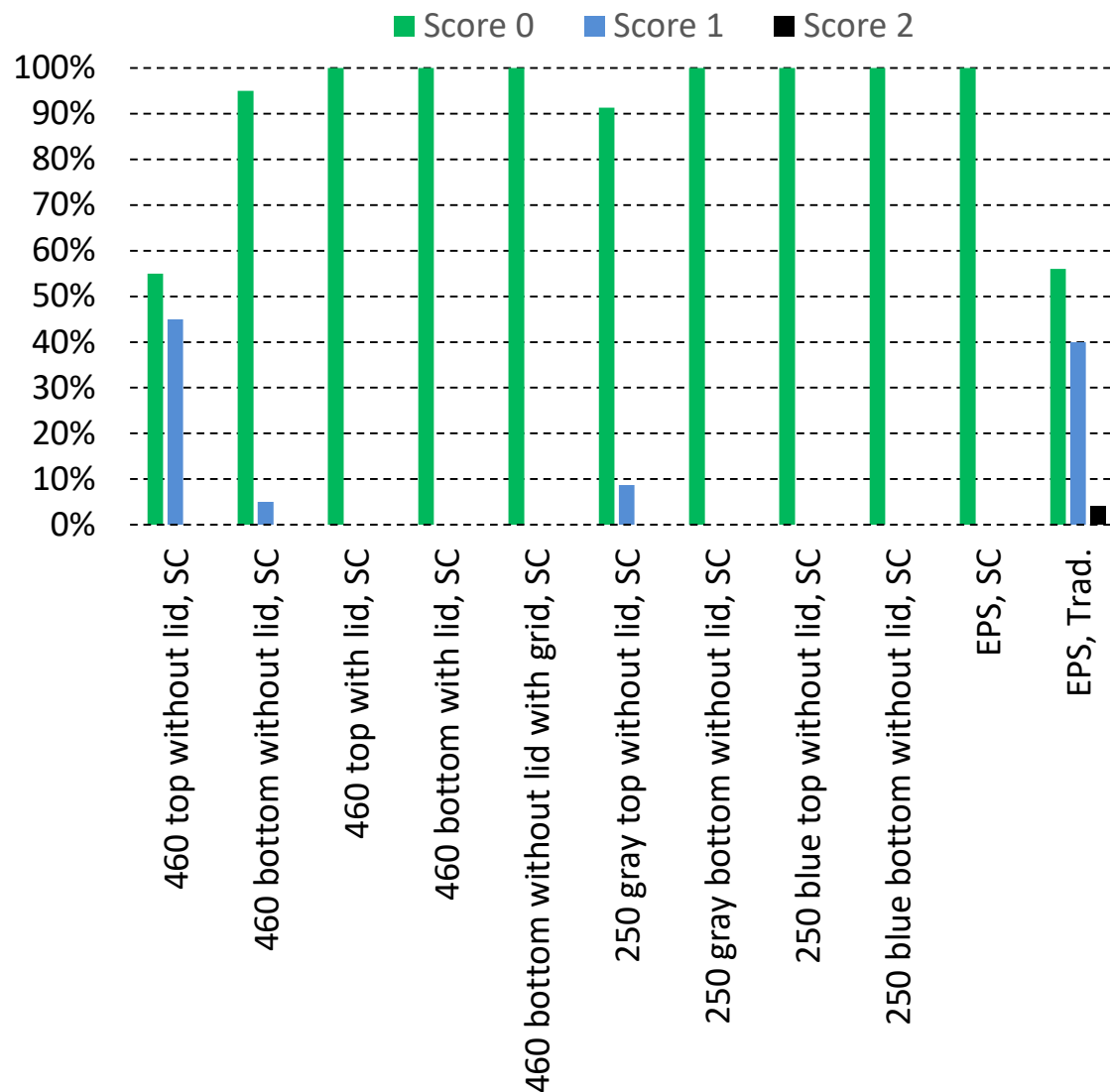


Score 4

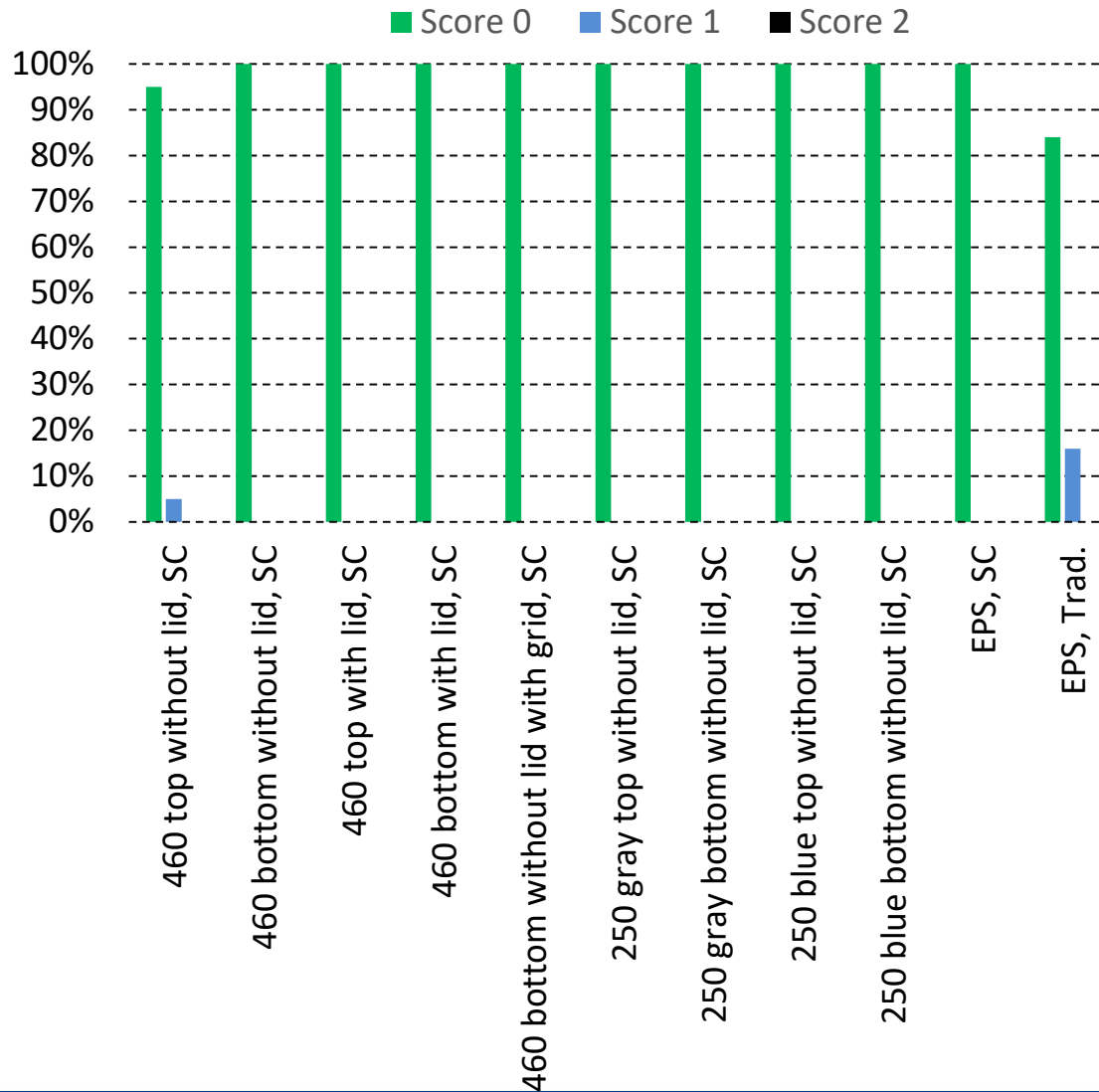


Score 5

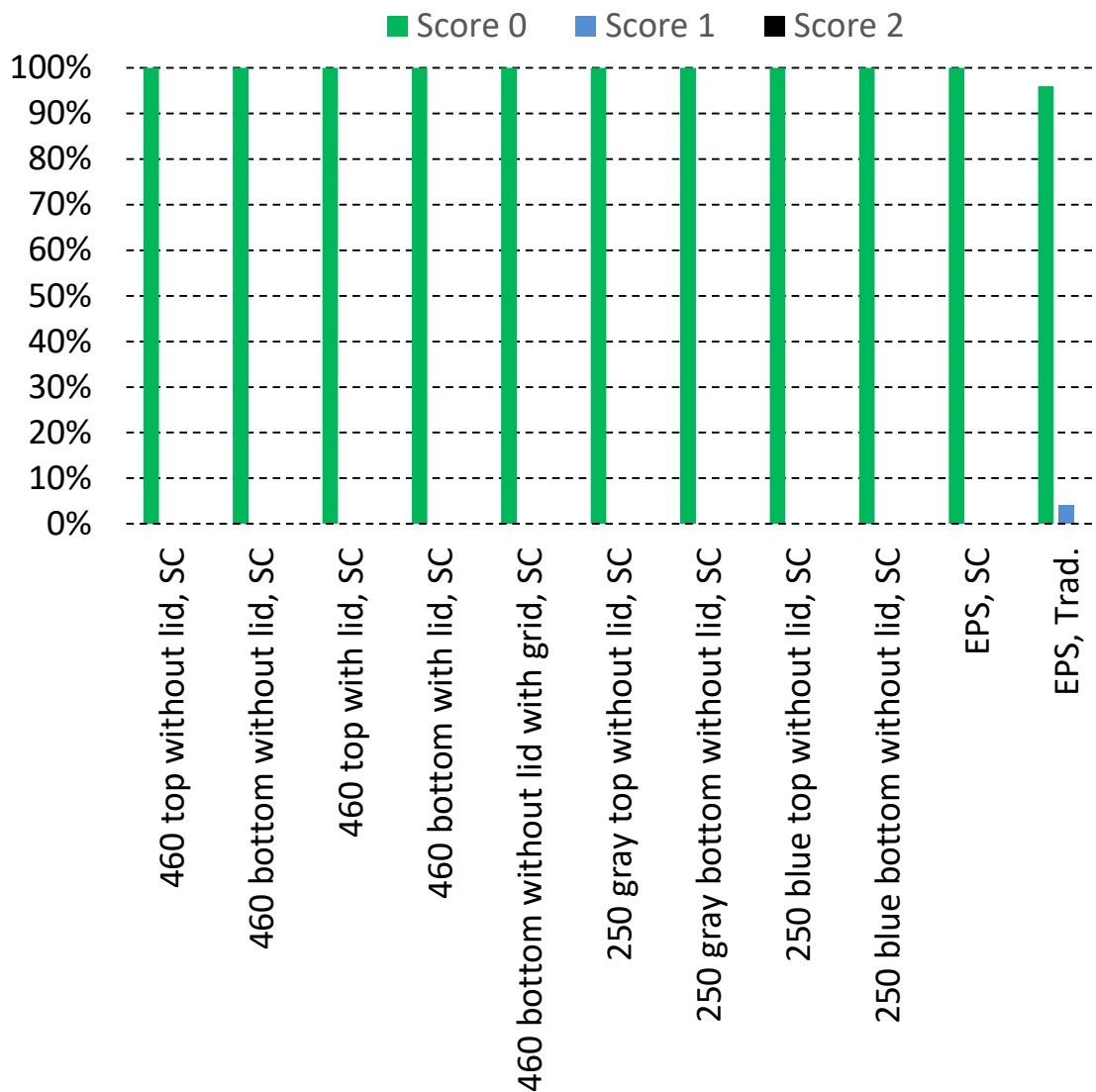
Niðurstöður gæðamats: Teygjanleiki (elasticity)



Niðurstöður gæðamats: Stífleiki (softness)



Niðurstöður gæðamats: Los (gaping)



Samstarfverkefni með Samhentum



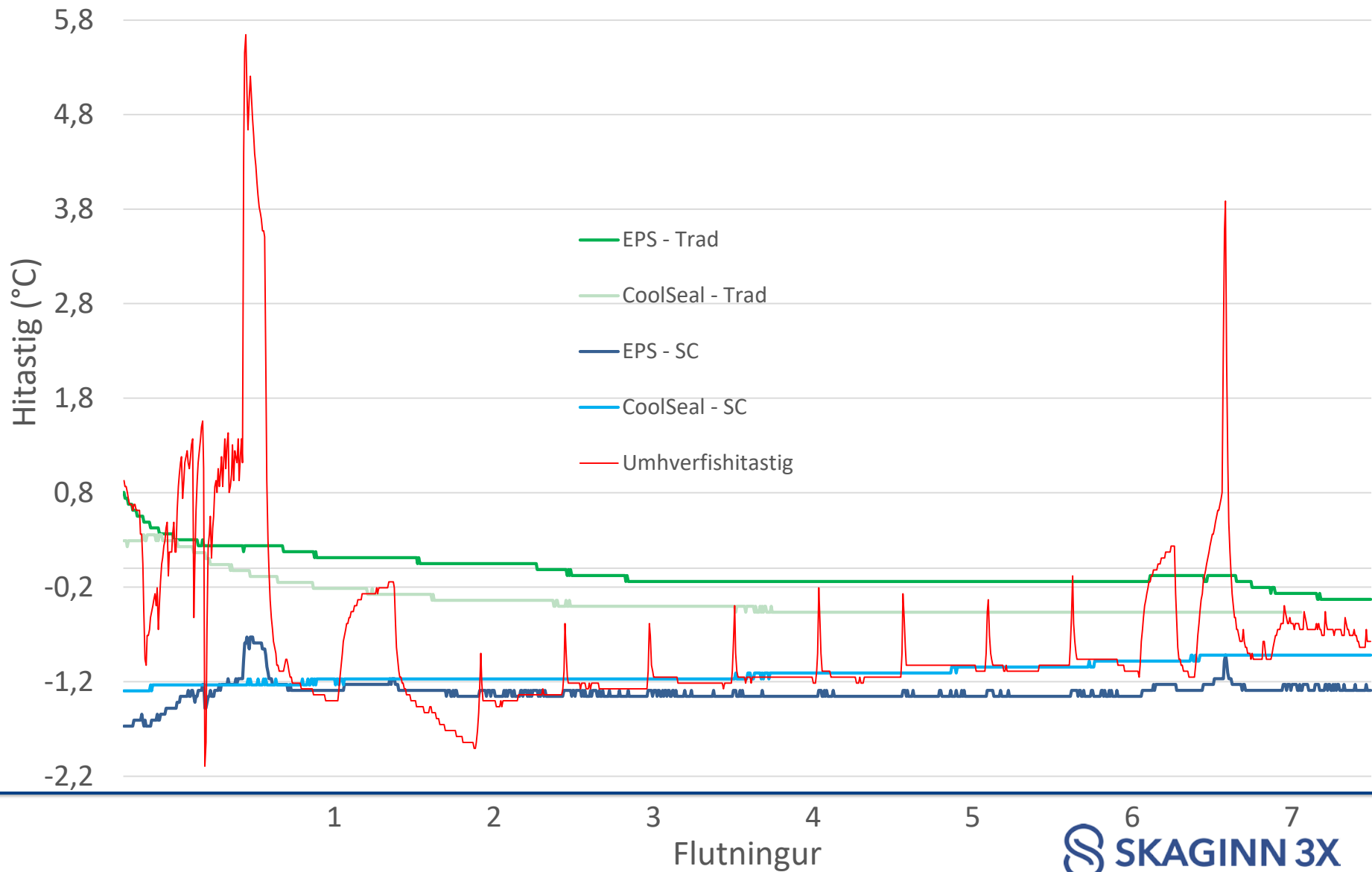
CoolSeal plastkassar



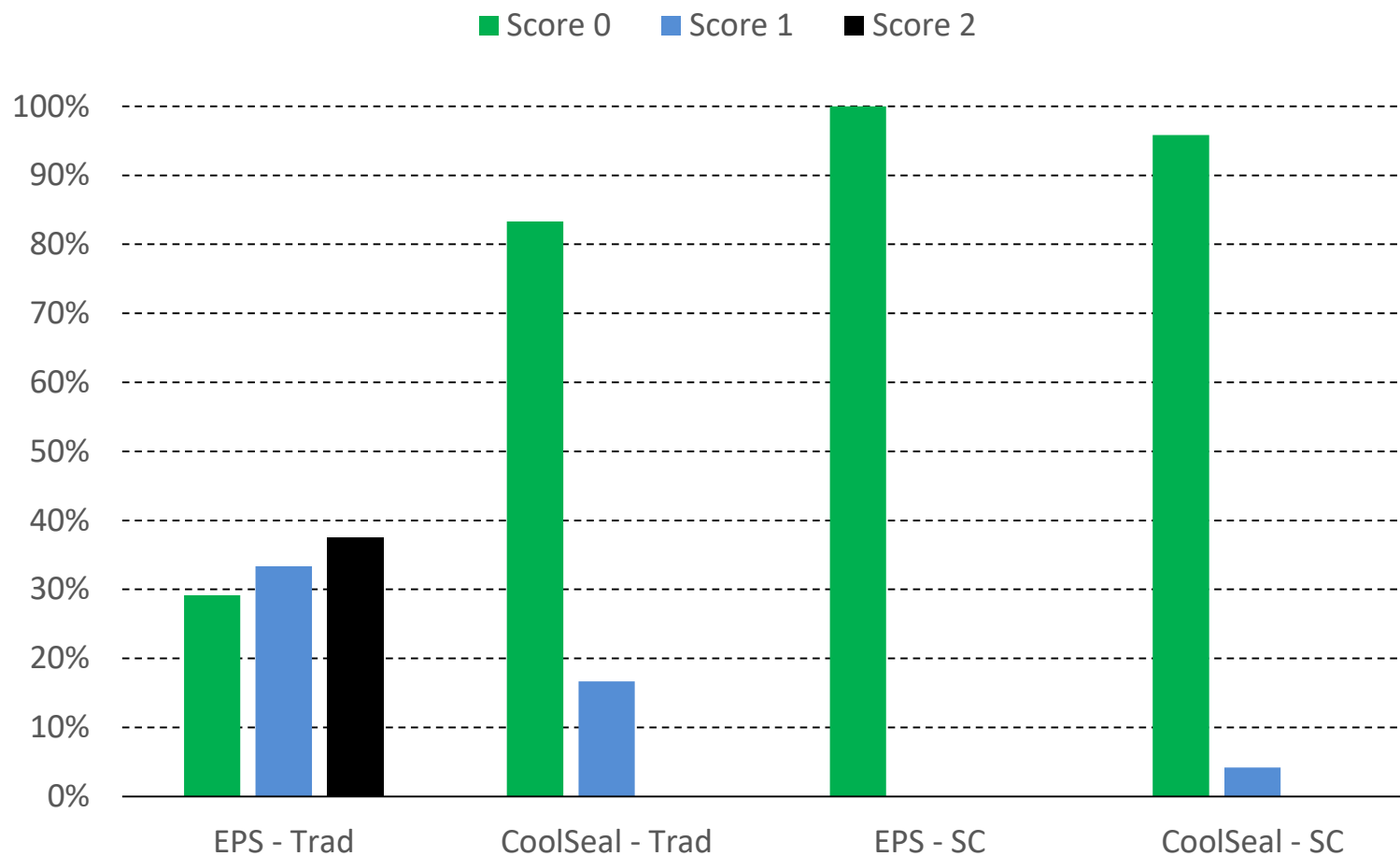
27 EPS kassar og 27 CoolSeal kassar á hvoru bretti



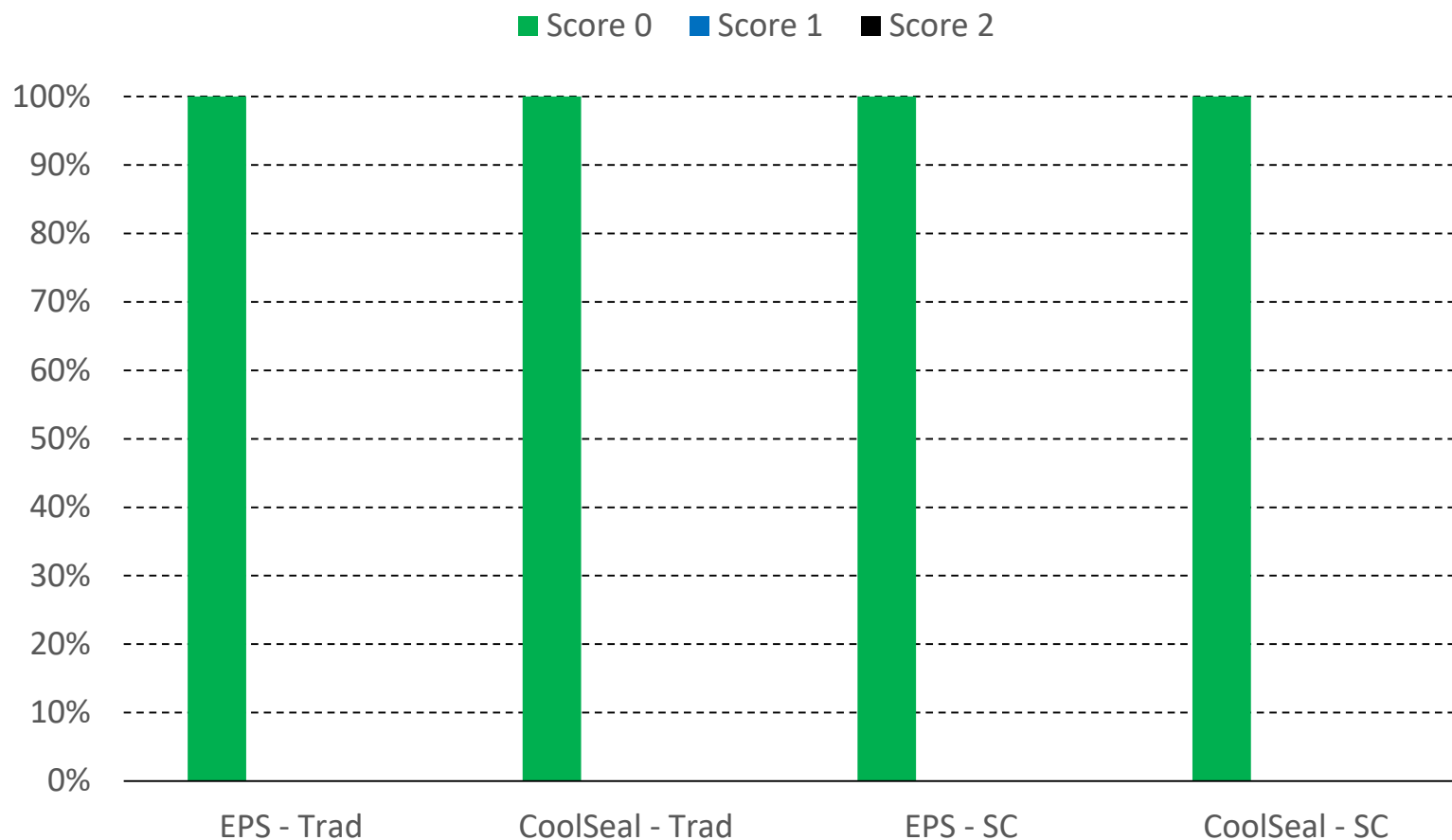
CoolSeal kassaflutningur



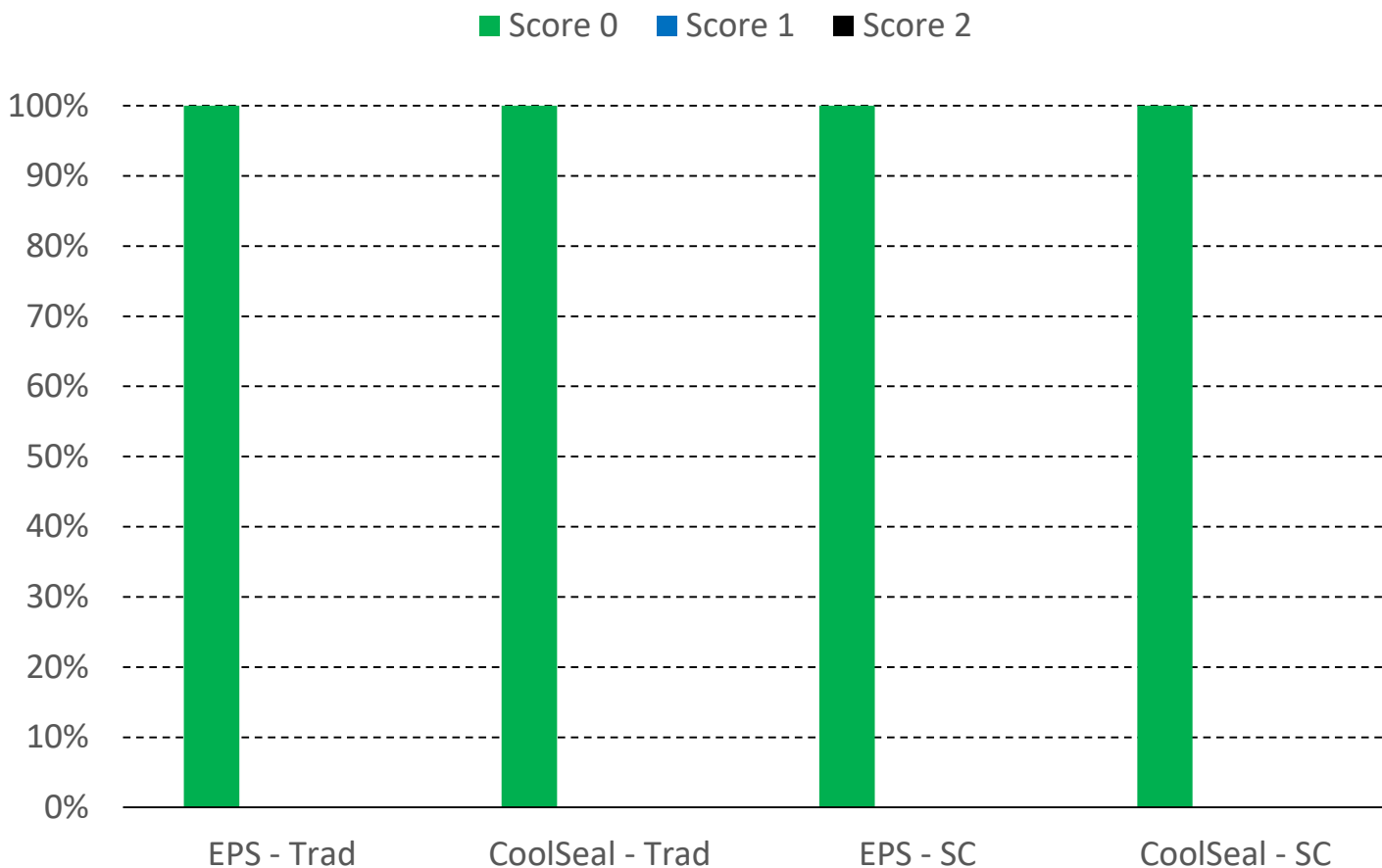
Niðurstöður gæðamats: Teygjanleiki (elasticity)



Niðurstöður gæðamats: Stífleiki (softness)



Niðurstöður gæðamats: Los (gaping)



Samantekt

- Með ofurkælingu er hægt að sleppa ís í flutningi og þar með:
 - Minnka þyngd umbúða um íshlutfallið
 - Minnka kolefnisfótspor
 - Lækka flutningskostnað
 - Möguleiki á að bæta við fiskum í kassa
 - Framúrskarandi gæði

Kærar þakkir!