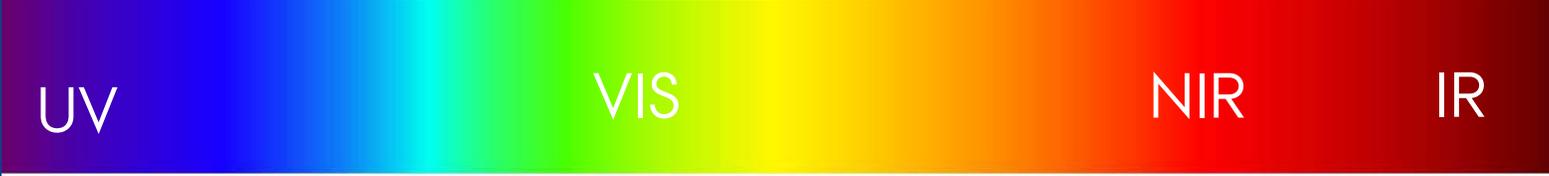


NIR til bestemmelse af frøkvalitet i spinat

Ph.d. projekt af
Merete Halkjær Olesen



UV

A horizontal bar representing the electromagnetic spectrum, transitioning from purple on the left to red on the right. The labels UV, VIS, NIR, and IR are positioned along this bar.

VIS

NIR

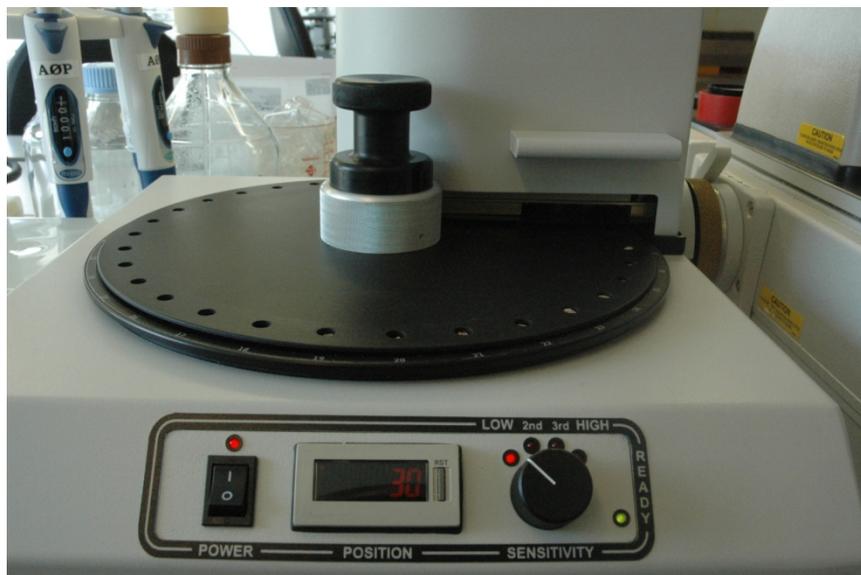
IR

NIR



Metoder

Enkelt kerne NIR



Spektroskopi

Multispektral billedbehandling



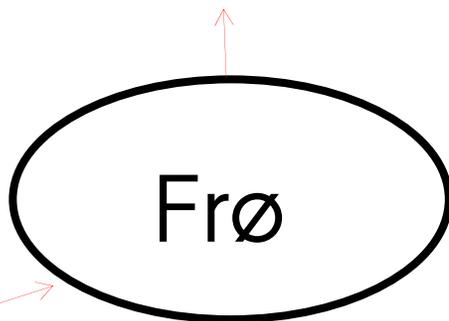
Billedanalyse

Enkelt kerne NIR

Transmission



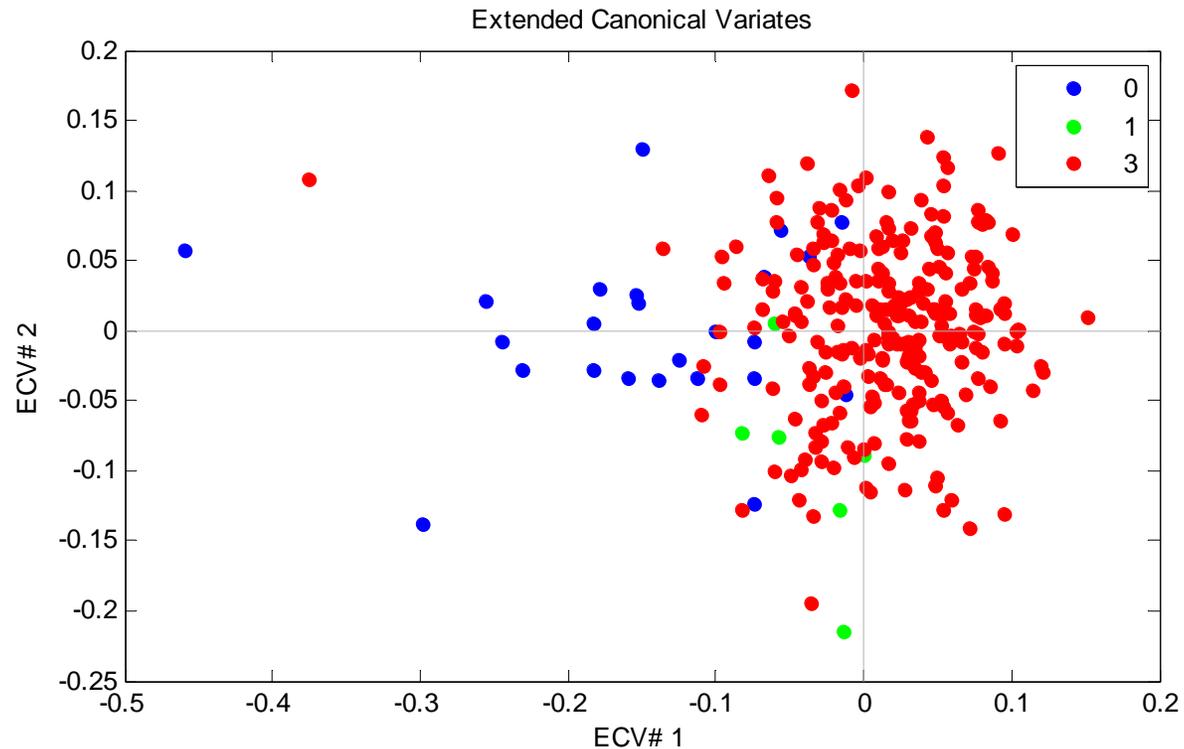
Data behandling



Lys: 833-1667nm

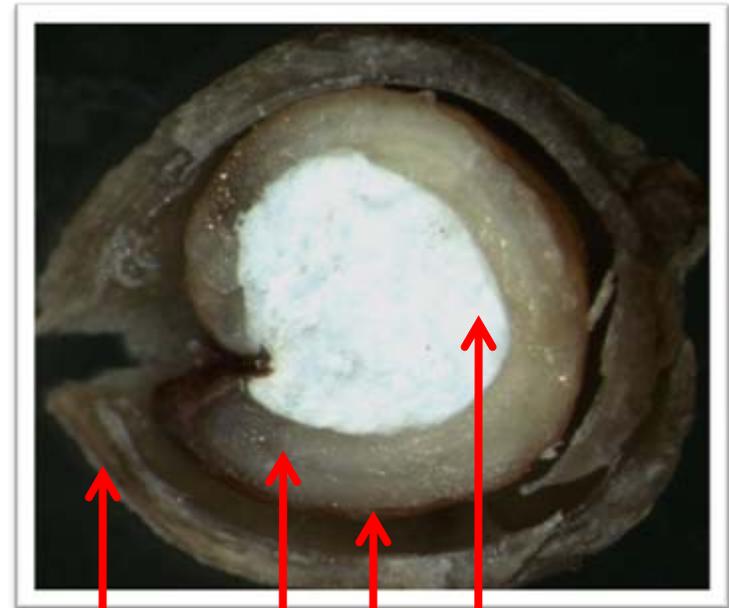
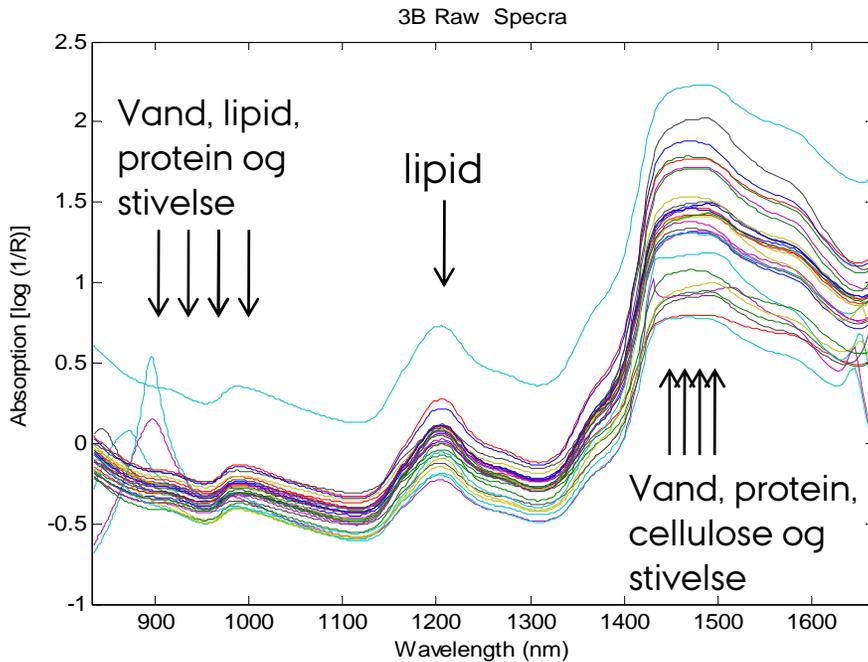


Resultater-spireanalyser samarbejde med Nisha Shetty



ECVA plot. Spirer talt efter 21 dage

Frøets kemi



Pericarp = frugtskal

embryo

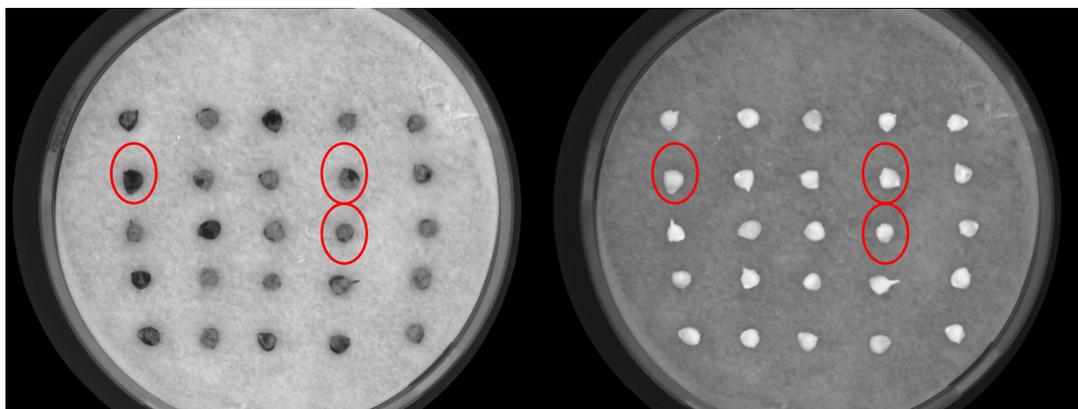
Testa = frøskal

Perisperm

Multispektral billedanalyse- VideometerLab

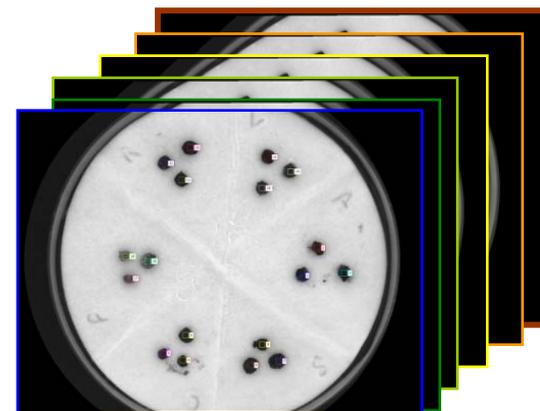
11 billeder med VIS bølglængder : 395-700nm

8 billeder med NIR bølglængder: 850-970nm



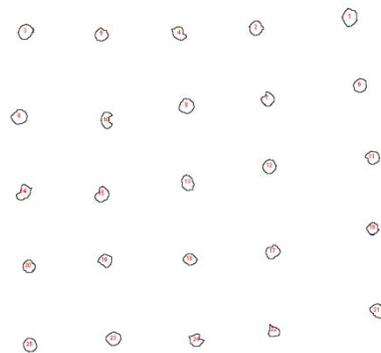
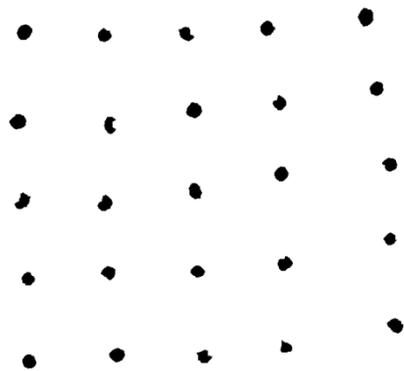
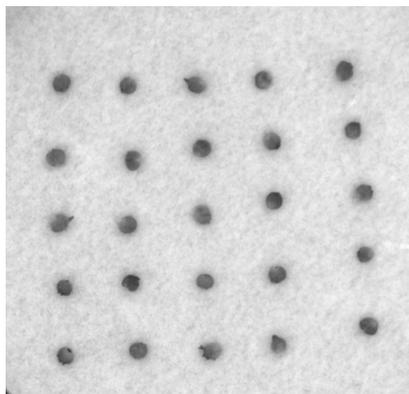
VIS

NIR



Ikke spirende frø

Data udtræk fra billederne (pixel værdier)



Billeder (19)

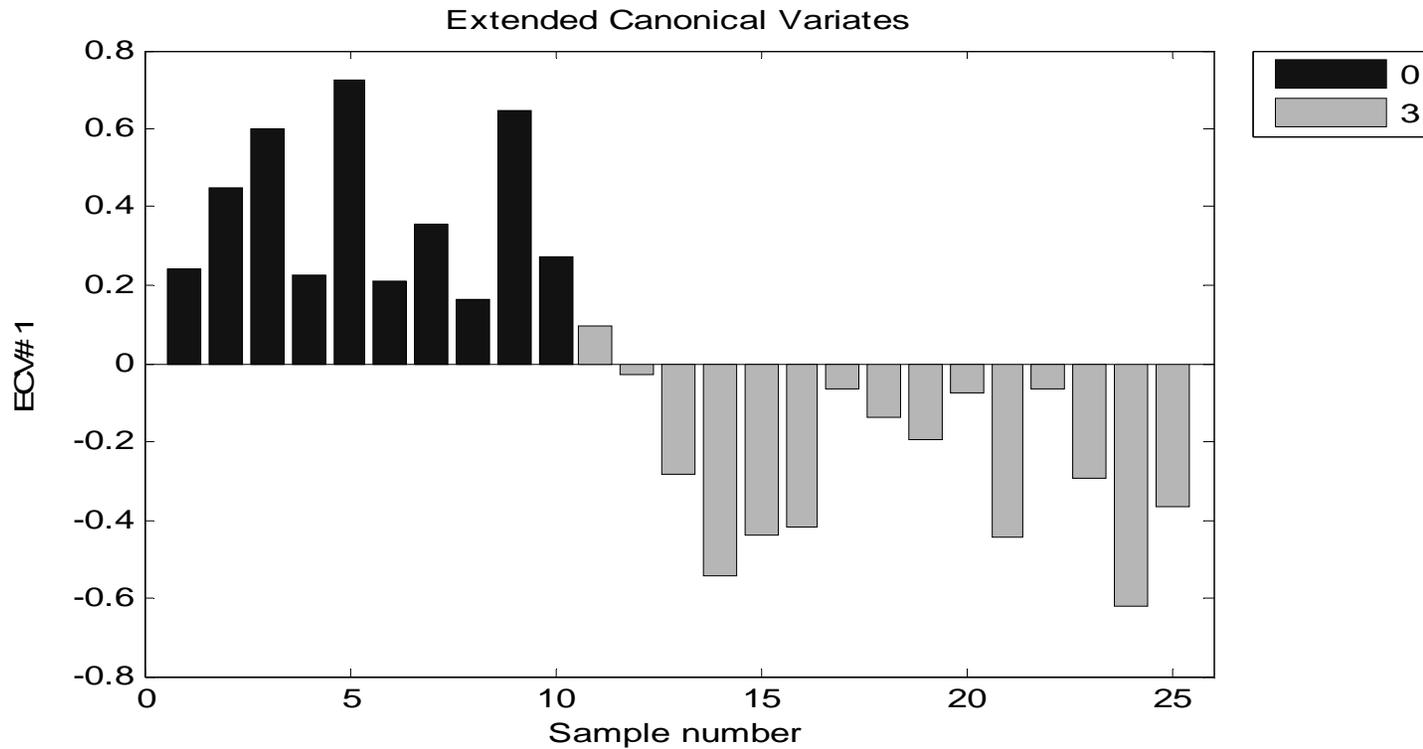
Treshold

Maske



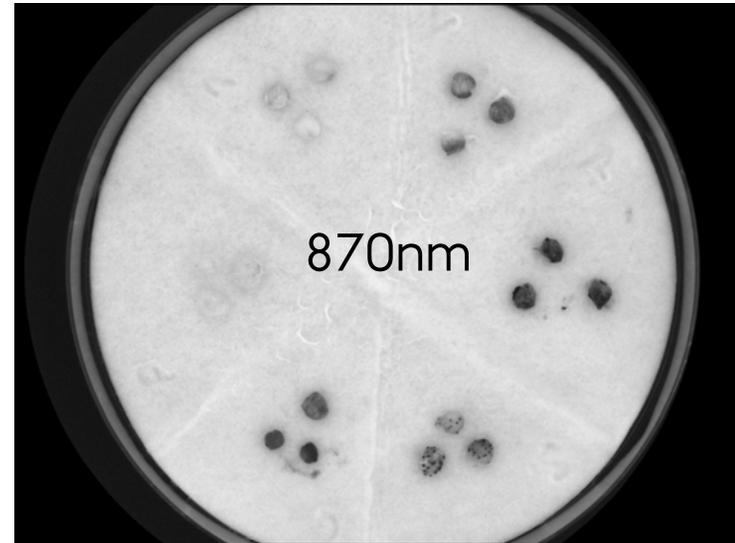
Gråskala og tekstur data

Kemometriske analyser samarbejde med Nisha Shetty

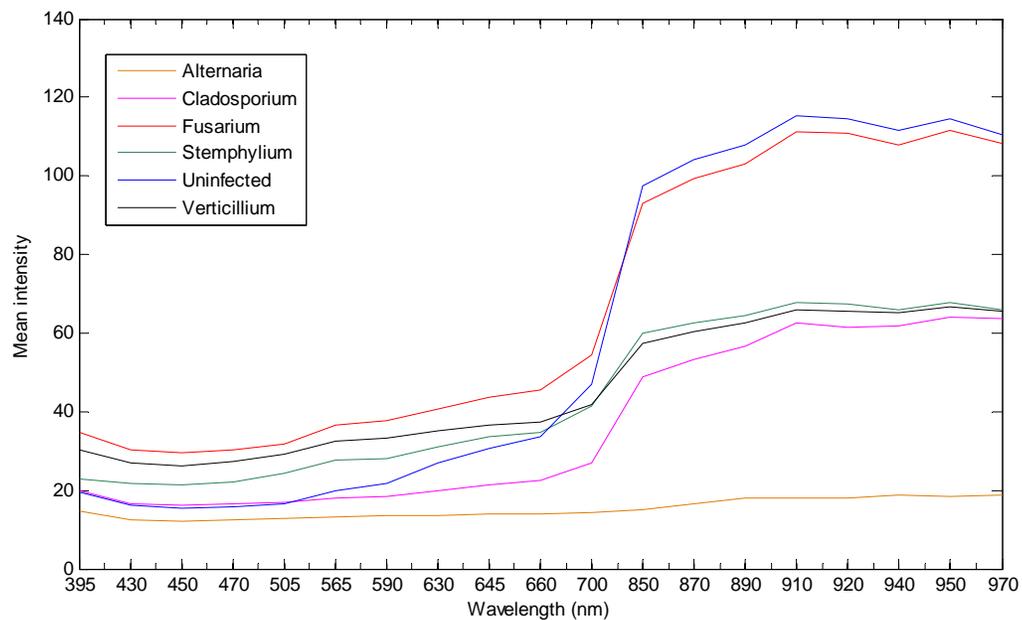


Sundhedsanalyser

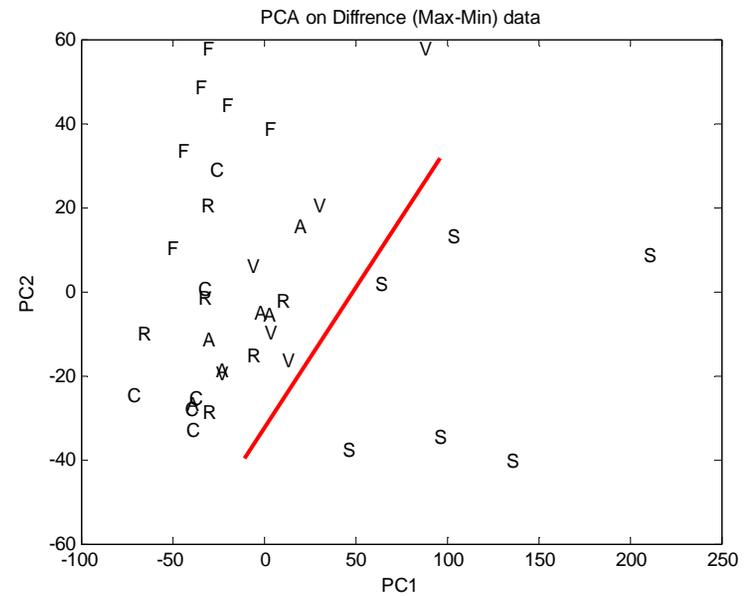
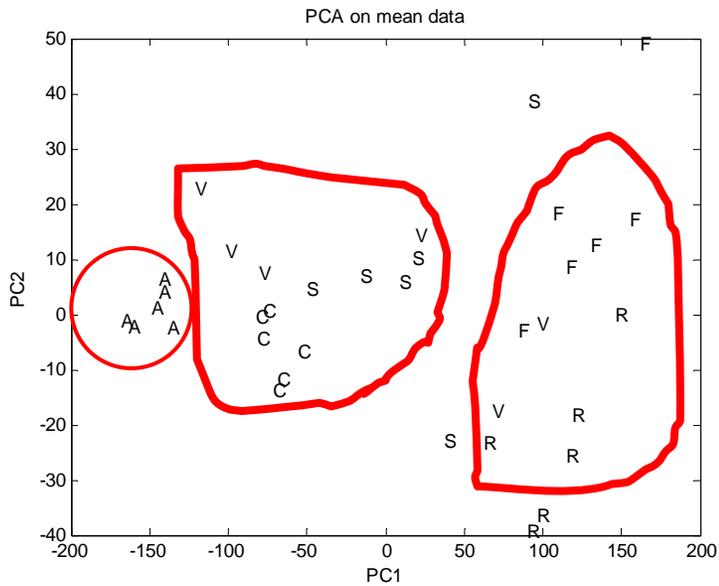
Seed science and technology, 39 (1) 140-150 (2011)



Gråskala værdi (gns.)



Eksplorativ data analyse- PCA



Tak for opmærksomheden

