

# Development of the Self Optimising Kohonen Index Network (SKiNET) for Raman Spectroscopy Based Detection of Anatomical Eye Tissue

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## Supplementary Information

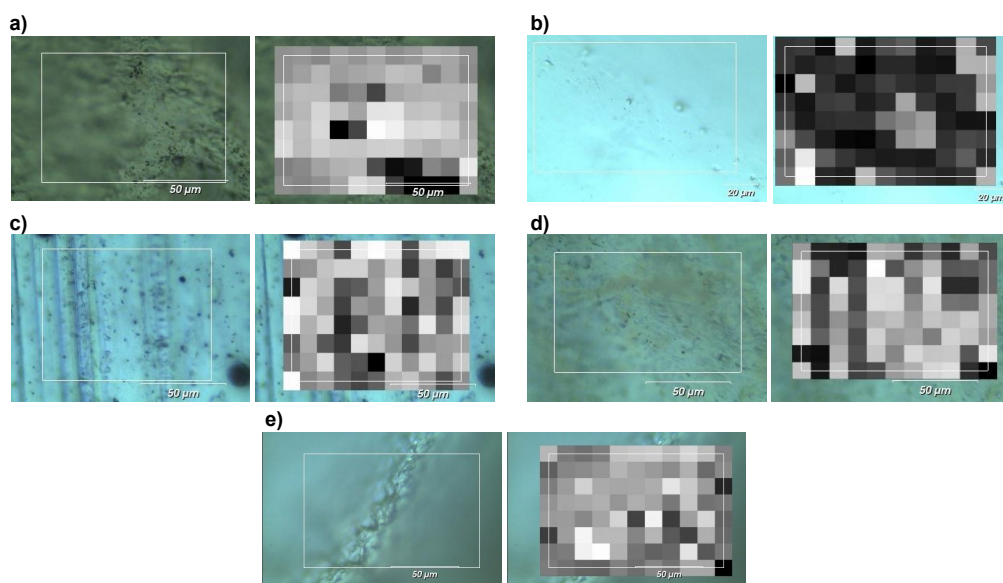
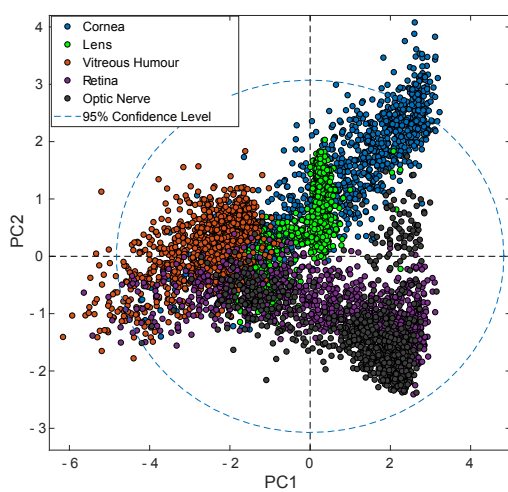


Figure S1: Paired examples of bright field optical microscope images (left) and PCA scores across map scan (right) for each tissue type: **a**, cornea, **b**, lens, **c**, vitreous humour, **d**, retina and **e**, optic nerve.

a)



b)

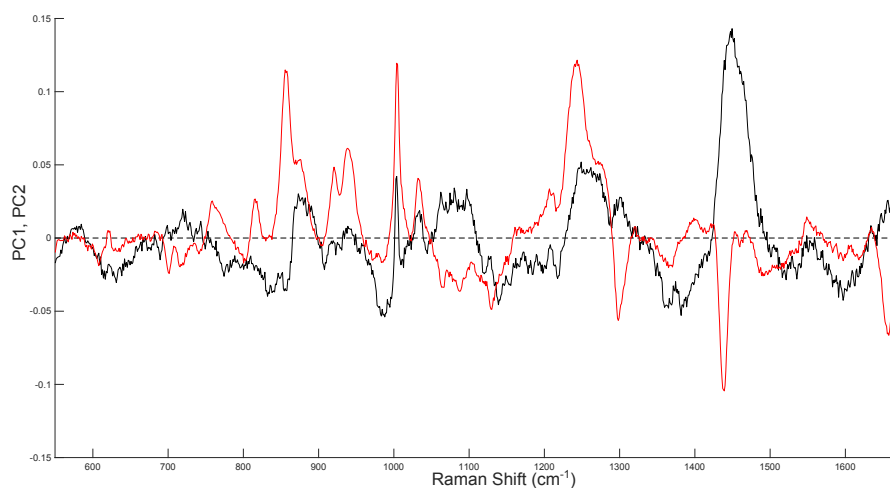


Figure S2: **a**, Scores plot for the first two principal components showing poor spatial separation of classes. **b**, Loadings for PC1 and PC2.

	Cornea	Lens	Vitreous Humour	Retina	Optic Nerve
Cornea	88.0	2.1	4.7	3.3	2.8
Lens	0.5	99.8	0.5	0	0.1
Vitreous Humour	1.0	0.1	96.5	2.7	0.5
Retina	1.0	0.2	2.3	95.7	1.7
Optic Nerve	4.6	0.71	0.8	2.2	92.5

Table S1: Confusion matrix showing average percentage for each class from the 1210 test spectra.

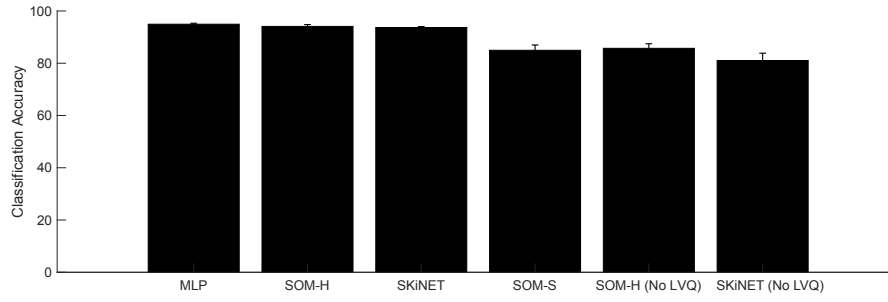


Figure S3: Comparison of classification accuracy for different approaches to SOM based classification. SOM-H refers to using the hit count for class identification, SOM-S uses supervised SOMs as described here [16]