	Unbound Mean (g)	Bound Mean (g)	Standard deviation	Binding capacity (%)	Ratio
EC	4.8807	4.1193	0.0671	45.7698	1:45
CC1	3.8051	5.1949	0.1233	57.7218	1:57
CC2	3.5727	5.4273	0.1392	60.3031	1:60

To work out the ratio:
There is 7.5g chitosan in the stock solution (1000ml)
There is 0.0075g in 1 ml of the stock solution.
The sample size was 12 ml, this equates to (0.0075x12) = 0.09g.
0.09g of EC binds 4.1193g acid - equal to 1g EC binding 45.77g acid
0.09g of CC1 binds 5.1949g acid – equal to 1g CC1 binding 57.72g acid
0.09g CC2 binds 5.4273g acid – equal to 1g CC2 binding 60.30g acid.

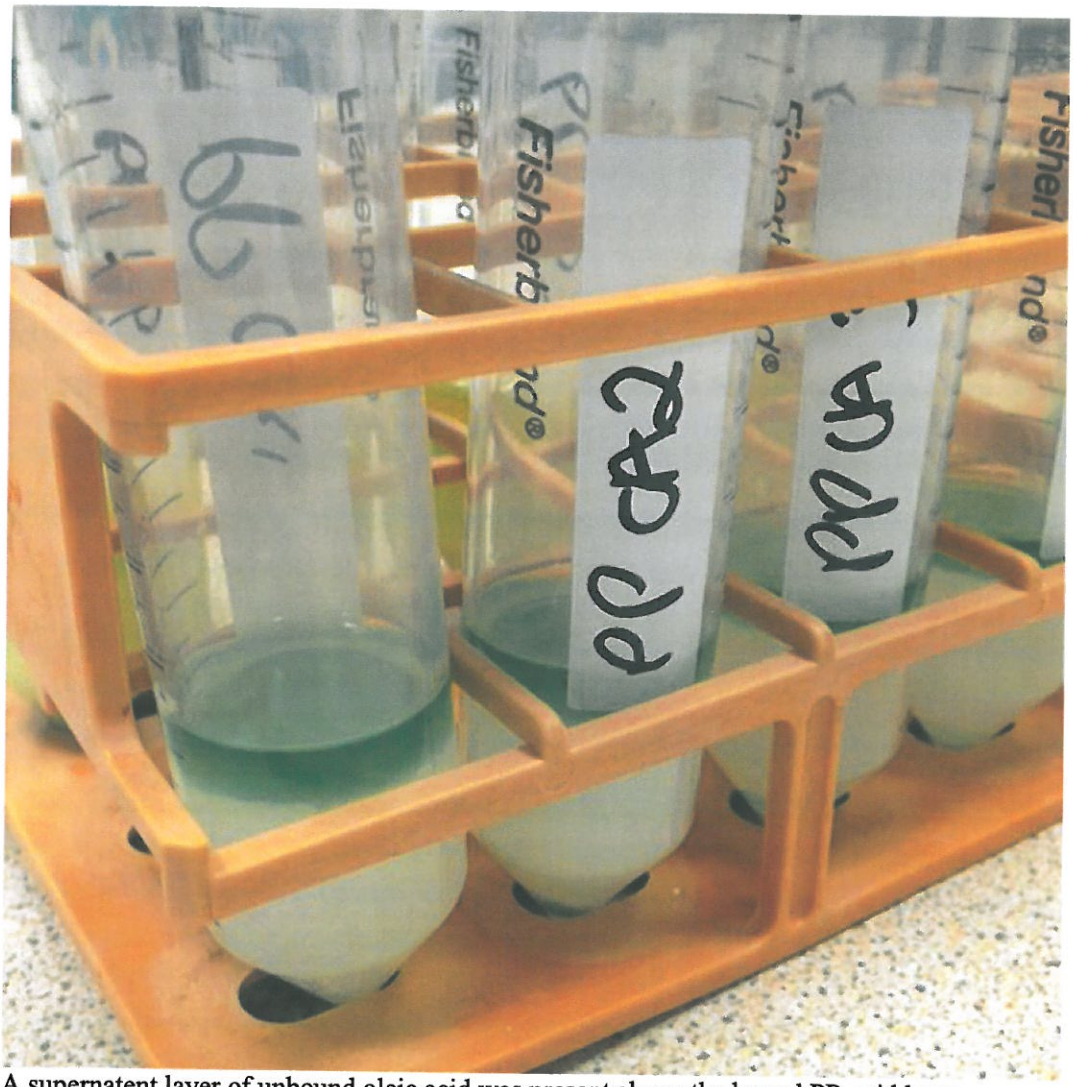
A t-test was used to determine if the CC batches were significantly different to the EC batch.

The CC1 batch is significantly different to EC ($P<0.001$)
The CC2 batch is significantly different to EC ($P<0.001$)

Summary:
The binding capacity of the Forza Chitosan (CC) batches is higher than the EC batches. The increase in capacity varies between the rapeseed oil and oleic acid tested.

Recommendations for future work:
A replica study should be conducted using a different fatty acid and oil to ensure the fat binding capacities are in a similar range.

Oleic Acid Results – 3g



A supernatent layer of unbound oleic acid was present above the bound PP-acid layer.

	Unbound Mean (g)	Bound Mean (g)	Standard deviation	Binding capacity (%)	Ratio
PP	1.5734	1.4266	0.1232	47.55	1:15

To work out the ratio:
There is 7.5g PP in the stock solution (1000ml)
There is 0.0075g in 1 ml of the stock solution.
The sample size was 12 ml, this equates to (0.0075x12) = 0.09g.
0.09g PP binds 1.4266g acid – equal to 1g PP binding 15.85g acid.

A t-test was used to determine if the Forza Chitosan data (from fat binding report 1) were significantly different to the PP batch.

The binding capacity of Forza Chitosan is significantly different to the PP ($P>0.001$)

Summary:
The binding capacity of the Forza chitosan is significantly higher than the PP alternative. However, the level of significance varies with the specific oil/acid used.

Quotes for Forza:

On the Forza Chitosan compared to the European Chitosan:

'The Forza Chitosan binds similar quantities of rapeseed oil to the European alternative'

'The Forza Chitosan binds significantly more (15% more) oleic acid than the European alternative'

'The Forza Chitosan does not contain heavy metals'

On the Forza Chitosan compared to the Prickly Pear alternative:

'The Forza Chitosan binds significantly more (10% more) rapeseed oil than the Prickly Pear alternative.'

'The Forza Chitosan binds almost 4 times (actual = 3.8 times) as much fatty acid compared to the Prickly Pear alternative (380% more)'