



Lipid Quiz

Event title	Lipaemic Sample Quiz
Venue	Careers Fair
Target audience	Medical students, university students
Learning Outcomes (maximum of 3)	Realise the real/visible impact of hyperlipidaemia on a sample. Relate that to analytical methodology (mainly light measurements). Demonstrate part of chemical pathologists clinical role in dyslipidaemia management.
Age range	18+ - could be adapted for younger audiences if treated more like a demonstration rather than a quiz.
How was the event advertised?	Was a deanery wide careers event, so advertised via the deanery.
Number attending	Approx 200 junior doctors and medical students with a very few medical science students.
Booking required?	No.
Length of event	Was an all day event.
Refreshments provided?	Yes had some sweets on the table, they attract people over.
Equipment needed	Table for quiz with cards and jelly 'samples'. See below for table – print out full and empty, leave empty table on desk and cut out the answers to use as cards. The participant needs to put the descriptions and jelly samples in the correct place on the table. See instructions below on how to make the jellies – note I used plastic disposable shot glasses bought from ebay and then small teaspoons so people can eat them. One pack of jelly and blancmange made approx 30 sets of samples and most people only ate one of them so don't need a set of 3 samples per person (also vegetarians etc can't eat gelatine).
People needed	A demonstrator.
Printed material used	Yes, can give verbal instructions then just the quiz
Room set up	A table – decorated to attract people over.
Event programme	The event was set up with a separate room with lectures then several side rooms with tables for each specialty.
Possible variations	Done as a quiz or a demonstration. Could extend to discussion of photometry, nephelometry/turbidimetry etc in which case some more visual aids could be used. Alternatively the clinical aspects of hyperlipidaemia can be discussed and the role of the chemical pathologist in their management.
What did the audience particularly like?	Participation.
What surprised the audience?	Were fascinated by the samples, all came over to see what they were.



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What else would the audience have liked?	They liked the sweets and leaflets from the college (and the bugs). Those whose interest were piqued wanted information about competition ratios, details on what the local training was like etc – therefore be prepared to answer, know the local training director etc.
How much preparation was involved?	Quite a bit to get your samples looking good.
Any other comments?	Need to know the contents of your jelly particularly whether animal based or vegetarian gelling agents and if animal whether pork or beef.
Images	See below
For more information please contact	Dr Kate Shipman, kate.shipman@doctors.net.uk



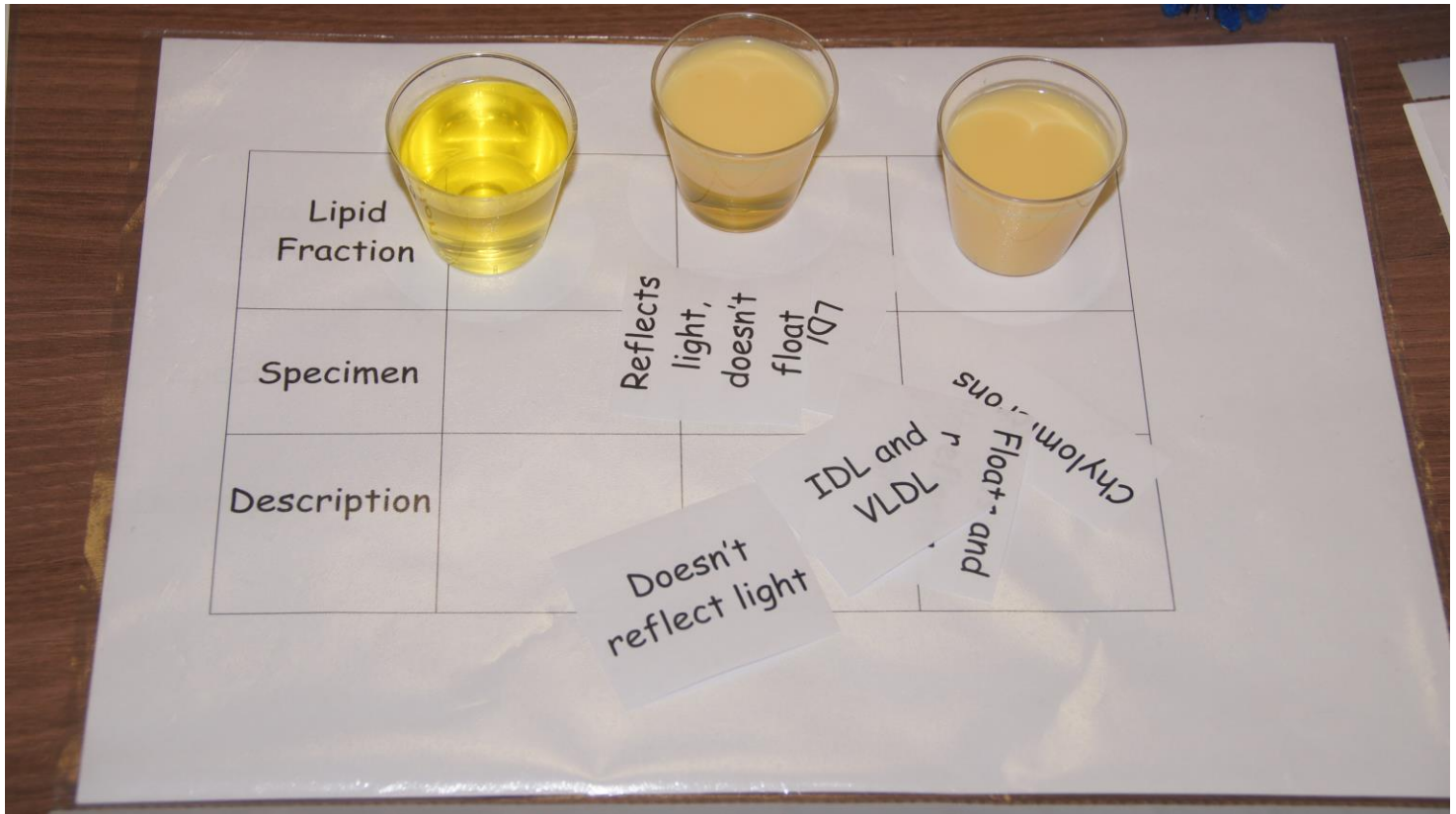
Lipid Fraction	Chylomicrons	IDL and VLDL	LDL
Specimen			
Description	Floats and reflects light	Reflects light, doesn't float	Doesn't reflect light



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Lipid Fraction			
Specimen			
Description			



Recipes for jelly:

There are different options depending on the level of complexity and whether you want them vegetarian.

Do the lemon first and full some 'samples' fully and others part way and let them set before starting on the blancmange.

You can do mixtures etc. depending on the level of complexity you want to achieve.

Plain serum:

1. Lemon jelly from a packet (rarely vegetarian unless use low sugar varieties, jelly less robust but can strengthen structure by adding sugar).
2. Home-made lemon jelly.*

Lipaemic serum:

1. Lemon jelly with some of the volume replaced by milk or yoghurt (melt jelly cubes in microwave according to instructions then top up to pint level with dairy product of choice).
2. Blancmange – cornflour mould** or gelatine and milk confection. The pictures above were bought lemon jelly and home-made honey and cardamom blancmange.*

*Recipes from 'Jelly with Bompas & Parr'

Lemon jelly



- Squeeze lemons until get 125 ml of juice and oranges for 100 ml of juice. Add to it 125 ml of sugar syrup (1:1 water and sugar caster or granulated 1g:1ml boiled together until dissolved) and 150 ml of water.
- Cut up 5 leaves of gelatine and put in a heat-proof bowl with a couple of tablespoons of the fluid mix. Allow 10 min to dissolve whilst bringing a pan of water to the bowl.
- Place bowl over water and stir occasionally until gelatine melted. Pour through a sieve into rest of juice mix, allow to cool (but not set) before pouring into moulds).
- Refrigerate to set.

Cardamom and Honey Blancmange

- Infuse 400ml of whole milk by warming to simmer point in a pan with 10 cardamom pods, zest of 1 lemon and 50g honey
- Take off heat and leave for about 20 mins to infuse and cool. Meanwhile cut up 4.5 leaves of gelatine and cover in a heat-proof bowl with 100 ml water to soften
- When softened place heat-proof bowl over simmering water until melted then pour over infused milk, stir then sieve into a bowl
- To speed setting and cooling can surround bowl in iced water but not will start to set fast (10-15 mins) so don't wander off too far.

****Cornflour mould: Recipe from 'Patisserie' second edition by L J Hanneman**

Materials required

- 2 pt/12 dl milk
- 3 oz/ 90 g cornflour
- 4 oz/120 g sugar
- 1 oz/ 30 g butter
- Vanilla essence

Instructions

- Blend the cornflour with a little of the milk
- Bring the rest of the milk to the boil and then add this to the cornflour mix stirring all the time
- Return to heat and simmer for a few minutes whisking all the time
- Mix in butter and sugar, cool slightly before adding to a mould
- To flavour can add vanilla or some citrus zest to the milk and to colour use food colouring.