

### Collecting/transport of substances

P1: It is important that when transporting chemicals that they are done properly. Wet chemicals should be kept in a bottle whereas dry chemicals should be kept in a sealed container that is hard to open. Heavy substances should be carried around in a trolley to make it easier to transport. Waste products in labs should be disposed of correctly to prevent any safety hazards. Some waste will need to be stored until they are able to be disposed of, when they are ready they will be taken away by experts for correct disposal. Disposing of Asbestos needs to be done by an expert. When disposing of Asbestos it must be sealed in a tough plastic bag and given to any of the expert staffs that are qualified enough to dispose of it.

**M1: If chemicals are not transported properly then the chemicals could get ruined. For example not transporting a dry substance in a container could put it at risk of gaining moisture and becoming moist. Another problem is that if you do not transport chemicals correctly they could get damaged or lost in the process, then a new set of chemicals would need to be ordered to replace them. If Asbestos isn't disposed of properly the fibres from the asbestos products will get trapped into our lungs and cause respiratory problems such as shortness of breath and possible cancer.**

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<http://www.pearsonschoolsandfecolleges.co.uk/Secondary/Science/BTECAppliedScience/BTECLevel3NationalAppliedScience/Samples/StudentBook/BTECLevel3NationalAppliedScienceStudentBookUnit2.pdf>

### Use of a centrifuge

P1: A centrifuge is used to separate liquids from a solution. In order to use one, firstly you should fill up a tube with the same mass as your other tube to counter-balance it. Then you should place the tubes opposite each other in the centrifuge, they must be opposite each other for it to work. Afterwards enter the settings in that are appropriate for the experiment and close the lid, make sure the speed isn't too fast otherwise the tubes will break. Once the centrifuge is finished and has stopped spinning you can remove the tubes.

**M1: When using a centrifuge, it is important to follow the correct steps. If you do not put the tubes directly opposite each other the separation will not work. Also if you put the speed of the centrifuge too high, you could damage the tubes or even break them. Also make sure that you counter-balance the tubes to match their masses. If you don't do this your results will not be accurate. Not only that but it is important that the lid remains closed whilst the centrifuge is on to avoid the chemicals splashing out of it and into someone's face/eyes.**

10. <http://www.wikihow.com/Use-a-Centrifuge>

### Instrumentation Techniques

P1: A colorimeter is used to find out the colour of a substance. To use one, firstly make sure the colorimeter is calibrated so you'll get correct results. Then remove the reference cuvette from the chamber and clean it so nothing left over will interfere, next fill it with the test solution and place it back into the chamber. When you do the last step make sure the absorbance level reads 0. Afterwards put the test solution into the specimen cuvette and place that into the chamber, and read the absorbance level.