

If you have any questions or comments about the operation of the DrySyn, or would like to purchase any more DrySyn equipment, please contact your local distributor (If outside of the UK), or contact **Asynt** Directly



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DrySyn Classic Instructions (ADS1)

IMPORTANT!

Please read these instructions carefully before using the DrySyn equipment

The DrySyn has many advantages over oil and mantles. However, the nature of the application of this equipment means that it can still be hazardous if not used properly. Please read the instructions carefully to ensure proper use of the equipment.

The DrySyn range includes

DrySyn Classic for reactions of 50ml to 1000ml

DrySyn MAXI + SuperMAXI for reactions of 2000ml, 3000ml and 5000ml

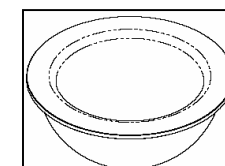
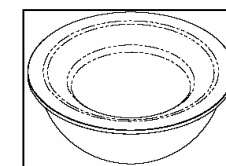
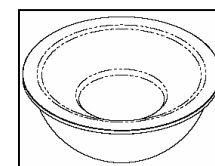
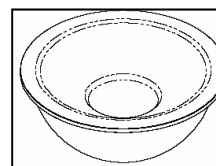
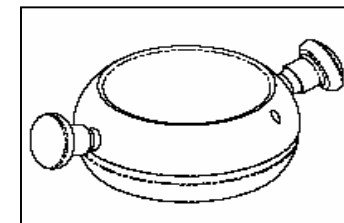
DrySyn MULTI and MULTI-M for up to 12 reactions.

For more information please visit
www.drysyn.com

Thank you for purchasing your DrySyn Classic reaction block kit

Included in the package you will find:

1 x DrySyn Classic Base for 1000ml flasks
4 x DrySyn inserts (50ml, 100ml, 250ml and 500ml)
2 x DrySyn Handles and spacers.



WARNING!

The DrySyn used in conjunction with a magnetic hotplate stirrer can reach temperatures of over 250°C. Please avoid touching the DrySyn or inserts at any time unless you are positive that it is cool. The equipment will hold the heat for some time after it has been used.

SETTING UP YOUR DRYSYN

1. Screw the spacers and handles into the DrySyn. Once assembled, there is no need to take the handles off the DrySyn.
2. Locate the DrySyn Base on a hotplate stirrer (Maximum hotplate diameter 145mm).
3. Select the appropriate size of insert for the flask being used and carefully place the insert into the DrySyn Base.
4. If available place the hotplate stirrer's temperature probe into the 3.5mm hole in the DrySyn's main body.
5. We recommend that you also insert a standard glass thermometer into the 7.5 mm hole provided; this will ensure that the temperature of the DrySyn can be read even when the power to the hotplate is disconnected.

SETTING UP YOUR REACTION

1. **INSPECT YOUR GLASSWARE**

Please ensure your glassware is free of star cracks. Flasks can become significantly weakened around the perimeter by etching which occurs when the flasks are poorly loaded into glass washers. Please be aware that glassware with etching should not be used in the DrySyn. Flasks that have had star cracks repaired in the lower half also should not be used with the DrySyn.

2. **ENSURE YOUR FLASK FITS PROPERLY**

When selecting a flask, firstly ensure that the flask fits correctly by rolling it around in the insert. If the flask feels tight, or scratches the side of the DrySyn, or feels like it is sitting on an edge, the flask may be too big. Choose another flask. The DrySyn is manufactured larger than the flasks supplied by Quickfit and Duran, please refer to the chart below.

DrySyn adapter size	Max flask diameter
50ml	51.4 mm
100ml	65.2 mm
250ml	85.4 mm
500ml	105.5 mm
1000ml	131.3 mm

3. Carefully place the correct size stirring bar into the round bottomed flask. Do not drop stirring bars into the flask as this can cause breakage!

4. **CLAMP YOUR FLASK SECURELY AT THE NECK**

Although the flask is supported from beneath, it is also advised to clamp the neck to stop the flask from tilting. If using a condenser, it is essential to support the flask with a clamp to hold the weight of the condenser and reduce the pressure on the flask.

5. **USE A LAB JACK IF AVAILABLE**

We strongly advise that you support the hotplate stirrer and DrySyn on a lab jack, this will offer the ability to lower the DrySyn away from the flask when cooling post synthesis as well as ensuring in an emergency the reaction flask can be lowered from the heat source. Lowering the DrySyn down by just 2-3mm during cooling will ensure that in the unlikely event that an oversize flask (See point 2) has been used it will not jam in the block.

6. **ENSURE THAT THE FLASK IS VERTICALLY POSITIONED IN THE INSERT**

Flasks may not be spherical on the angle. You could increase stress on the flask if it is not vertically positioned.

7. Add a condenser or other glassware as desired. Solvents and reagents can be added more easily using a 2-neck flask.

8. Adjust the stirring speed to a suitable level for good mixing.

START YOUR REACTION HEATING

1. Set the appropriate temperature on the temperature controller (if fitted) or via the hotplate control.

2. **DO NOT SET THE TEMPERATURE TOO HIGH**

For low boiling solvents 5-10°C above the bpt is sufficient for reflux. For higher boiling solvents 10-20°C above the bpt will give good refluxing.

3. Ensure that there is adequate cooling water supply to the condenser to minimise loss of solvent.

4. **IF YOUR OPERATING TEMPERATURE IS ABOVE 150°C WE RECOMMENDED THAT YOU INSULATE THE FLASK WITH ALUMINIUM FOIL**

This reduces the thermal gradient across the glass and reduces stress on the flask at high temperatures.

Important note!

The maximum recommended temperature of the base for prolonged operation is 250°C. Exceeding this temperature may reduce the life of the stirring hotplate.

AFTER REACTION

1. Please make your colleagues aware that the DrySyn could still be hot for some time after the hotplate has been switched off if you are leaving it unattended.
2. If available it is recommended that you lower the hotplate stirrer and DrySyn from the reaction flask on a lab jack during cooling.

3. **YOU MAY TRANSPORT THE DRYSYN USING THE HANDLES, HOWEVER THIS IS ONLY RECOMMENDED IF THE TEMPERATURE OF THE BLOCK IS LESS THAN 65°C.** Otherwise, please use insulated Gloves to avoid burns!