



Brain Slice Keeper

BSK1

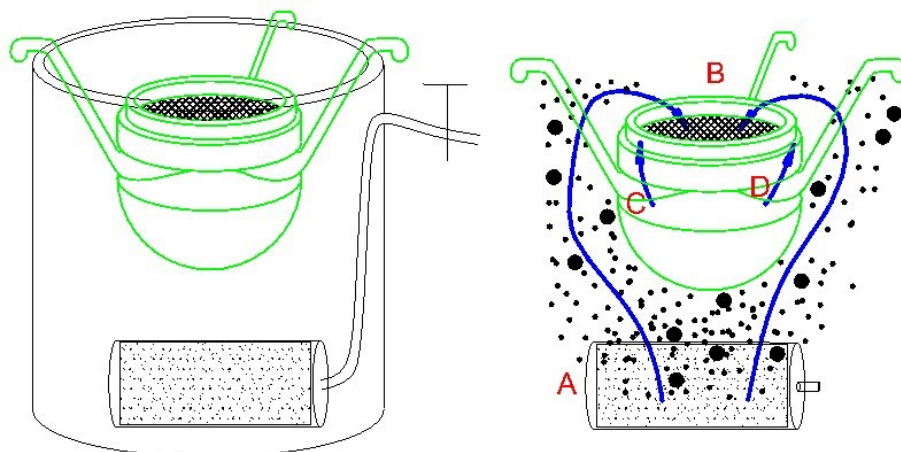
Pre-Incubation of Slice Preparations

The Brain Slice Keeper has been designed to pre-incubate brain slices prior to transfer into recording chambers. It consists of a pair of closely fitting acrylic rings, upper and lower, between which is wedged a sheet of fine nylon netting, designed to be easily replaced when necessary.

FEATURES

- * Slices maintained for many hours prior to transfer to recording chamber
- * Hooks into purpose designed holding vessel (BSKV) or standard Buchner funnel for bubbling carbogen into ACSF
- * Slices supported on a quick change nylon net
- * Modular design simple to set up and maintain

In operation, the BSK1 is totally immersed in an ACSF-filled purpose-designed holding vessel (BSKV) into which a 95% O₂, 5% CO₂ gas mixture is supplied with a ceramic bubbler. The bubbles rising from the base of the BSKV saturate the ACSF and provide constant circulation of medium to the slices which rest on the nylon net. Since the lower ring of the BSK1 carries a deflecting shield, bubbles are prevented from being trapped under the slices and ensure continuous circulation of medium. Slices remain viable for many hours in these conditions. The BSK1 together with the BSKV holding vessel can easily be placed into a water bath for regulating the incubating temperature as desired. Alternatively a standard Buchner funnel with 40 to 60 micron porosity sintered glass membrane can be used instead of the BSKV. When first placing the BSK1 into the BSKV, any large air pockets are dispelled from under the net by means of a teat pipette. When in place, the fluid level is maintained at least 5mm above the upper ring of the BSK1. This ensures circulation of fluid over the top and downwards towards the slices. The typical fluid volume with BSK1 with a BSKH is 220ml and with a Buchner funnel it is 320ml.



SCHEMATIC ARRANGEMENT

LEFT: BSK1 hooked into the holder BSKV.

RIGHT: Oxygen bubbles rising from the ceramic air stone A induce circulation of ACSF to the top ring B holding brain slices on the netting. Circulation continues down on to the slices preventing movement and then out via open corners of deflector at C and D. The deflector has a curved half-cylindrical surface with closed ends so that bubbles can not reach the underside of the net carrying brain slices.



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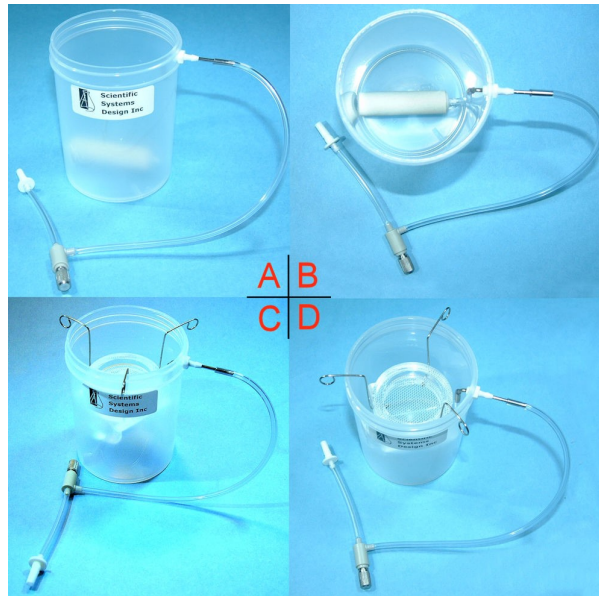
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Brain Slice Keeper arrangement in its holder (BSKH)



ABOVE: Components of BSK1 slice keeper and Holder BSKV: A BSKV consists of a 200ml trough fitted with a ceramic air stone and needle valve regulator for fine control of gas. B View of BSKV from above. C BSKV with BSK1 in place and D viewed from above. **BELOW:** Dimensions

