

The Water I purg'd from Air in the following manner.

I first boyl'd it well over the Fire ; afterwards I included it *in Vacuo*, where it remain'd in that State till it was cold ; from whence I took it, and proceeded presently on the Experiment, which on two Tryals succeeded alike.

III. *An Account of an Experiment touching the Freezing of Common Water, Ting'd with a Liquid said to be Extracted from Shell-Lac. By Mr. Francis Hauksbee. F. R. S.*

**T**HIS Liquid is a very deep Red ; a small quantity of which, will Tinge twenty times as much of Common Water of a very good Sanguine Colour hardly Transparent. I found this Liquor, Extracted from *Lac*, would not Freeze ; for during the Coldest Weather we have lately had, it retain'd its Fluidity ; and when it was mixt with Water, and expos'd to Freeze, the Water, in which it was mixt, soon suffer'd a Congelation ; and so much of it as underwent the Change, appear'd of a fine but pale Transparent Red ; the Body of the Colour retiring into the Middle, in form of the Figure *a a*, in the Margin, and was wholly Opake. And when no more of the mixt Liquid would be Frozen, I took the Body of Ice out of the Glas that contain'd it,



it, by just warming the sides of it by a Fire. I found then by pricking a piece of Wire into the dark part of it, the Red Liquor immediately succeeded thro' the Hole I had made, seemingly as pure and as abstracted from any Mixture of Water, as it was before it was put into it. This Red Liquor I found to be something specifically heavier than Common Water; which makes me wonder, why the Figure it made on its retiring, was not rather the reverse to what it appear'd: For I should think it reasonable to expect, that the upper part, which was the broadest, should, by its own weight, alter or reverse the Position of the Figure. Another thing very remarkable, was, that this retir'd Liquid, as it seem'd to keep an equal distance from the sides of the Glass, so did it from the bottom and top of it; which upon repeated Tryals answer'd the same.

I likewise mixt some Common Water with a strong Purple Liquor, made from Logwood, boyl'd in Water, in which some Allom had been dissolv'd. A little of this would give a strong Tincture to a pretty Quantity of fair Water; and when expos'd to Freeze, would retire towards the Middle, leaving the first Frozen Water of a very pale Purple, in comparison to the middle part; which when I had taken out of the Glass that contain'd it, and broke it, I found 'twas Frozen through, but of so dark a Colour in the middle, that it came near a Black.