A COCKTAIL OF NUCLEIC ACIDS

50 Years of the Double Helix

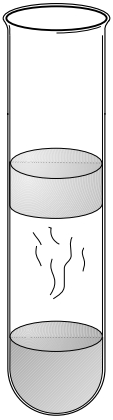
WE wish to suggest a recipe for a cocktail containing deoxyribose nucleic acid (D.N.A.). This drink has novel features which are of considerable biological interest.

By combining elements from Cambridge, London and the Americas, this red, white and blue drink pays tribute to all of those who worked on the double helix. A hint of pineapple juice helps to celebrate 50 years of what Francis Crick called 'The Golden Helix'.

Equipment & Materials

From England:

- 8 frozen strawberries (about 65 g) — the variety 'Cambridge Favourite' is naturally the most appropriate.
- London Dry Gin — the strongest you can find. This is necessary to precipitate the D.N.A. *N.B. Chill this gin in the freezer for at least 2 hours before preparing the drink.*



This figure is purely diagrammatic. The D.N.A. precipitates in the gin.

From the Americas:

- 60 ml fresh pineapple juice. This must be fresh as protease activity is required to degrade the histones associated with the D.N.A.
- Blue curaçao†.
- Lime juice and icing sugar, to decorate.

† if it proves difficult to form distinct layers of liquids, dissolve a little sugar in the curaçao.

Also required:

- A blender[1].
- Large test tubes or boiling tubes, for serving.

Method

1. Moisten the rim of a large test tube with lime juice then dip the rim into icing sugar.
2. Add about 10 ml* of blue curaçao to the tube.
3. Tilt the tube then with great care, pour about 20 ml* of ice-cold gin down the side of the tube to form a layer above the blue curaçao.
4. Blend the strawberries and pineapple juice for 10 seconds, then drop the purée on top of the gin. Wisps of strawberry D.N.A. will precipitate into the gin (see diagram).

* adjust these volumes for smaller tubes.

Discussion

Others have suggested (unpublished data) that thin helical twirls of lime peel may be used to decorate the rim of the tube. More enterprising drinkers have tried to recover the nucleic acid from the gin, using a swizzle stick. We are not aware of the details of the results of these investigations.

Most of the 'D.N.A.' in the gin is probably pectin, although the method described here is strikingly similar to the 'Marmur preparation' used by molecular biologists throughout the world to prepare D.N.A.[2]

It has not escaped our notice that this cocktail contains significant amounts of alcohol and should, therefore, be consumed only by adults and in moderation.

We are much indebted to Peter Finegold for suggesting that we create a cocktail to celebrate the anniversary.

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[1] A Waring blender, as used by Fred Hershey and Martha Chase, who in 1952 proved conclusively that DNA was the genetic material, seems an appropriate model. Hershey, A. D. and Chase, M. (1952) *J. Gen. Physiol.* **36** 39–56.

[2] Marmur, J. (1961) *J. Mol. Biol.* **3** 208–218.