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The adage *Red with Meat, White with Fish* is religiously adhered to by many. This is not surprising, as the combination of red wine wish fish usually results in a powerful and unpleasant fishy aftertaste. Yet flying in the face of this theory are successful recipes such as *turbot poached in red wine*, plus occasional and unexpected pairings of rich reds with seafood that work a treat.

Scientist Takayuki Tamura and his colleagues at the Product Development Research Laboratory of Mercian Corporation in Kanagawa, Japan reputedly provided the answer in a series of experiments. So to test their theory, at our latest Berrys food and wine course on Monday (*Fine Wine with Fish*), we conducted an experiment with an 18-strong group of customers.

To start the evening, we looked at why the traditional rule seems to make perfect sense. We know that salt and tannin clashes and that this results in an unpleasant metallic taste in the mouth. With salt making a regular appearance in many fish recipes and most red wines possessing tannin, it is not surprising that the two are not usually paired. We also know that tannin is attracted to saturated fats, with their molecules attaching to one another with pleasing results: the dry puckering mouthfeel caused by tannin is vastly reduced because the tannin has attached itself to the fat rather than saliva, and by doing so also strips the mouth of fat leaving taste buds cleansed and able to enjoy to the full the next mouthful of food. Unfortunately fish has unsaturated fats, leaving the tannin molecules free to cause havoc in your mouth!

Then we looked at the new Japanese theory: that it is the iron content in wine, not its colour (and thus tannin) that causes all the nasty aftertastes. This conclusion was the result of 7 experienced wine tasters sampling a series of red wines and white wines while eating scallops. They were instructed to rate any fishy aftertaste on a scale of 0 to 4 (0 indicated no aftertaste, 4 an extremely strong one). Over the course of 4 sessions they tested in random order 38 red wines, 26 whites, 2 Sherries, 1 dessert wine, 1 Port and 1 Madeira. Having analysed the results, Mr Tamura found that the wines rated with the strongest fishy aftertastes were those with high levels of iron. Tanaka ran a second experiment to check his results: by tampering with the wines to remove or add iron, he was able to isolate the cause and identify that fishy aftertastes were specific to iron.

Before we began Berrys' experiment our 18-strong group were given a few scientific facts to consider:

- Unsaturated fats (as found in fish) have double bonds and are less stable and more prone to oxidative spoilage than saturated single bond fats (meat)
- The fattier (unsaturated) the fish, the quicker it spoils
- Iron is a catalyst which speeds up oxidation (spoilage)
- You can get iron in white and red wine because iron comes from the soil
- However, high chalk content soils block the take up of iron and causes chlorosis
- There is no way of knowing the iron content in a wine without a research laboratory

Then for the experiment. The order in which the food and wine pairings were served ought to (if Mr Tamura is right) have begun with the most successful match (course 1, wine 1) and end with the most disastrous (course 3, wine 6).