PHILADELPHIA SCIENCE FESTIVAL

YELLOW SPRING FARM FIELDSTONE CHEESE & IPA

Salt is an excellent bitter blocker. IPA is a bitter beer. Cheese contains lots of salt. When you eat cheese with IPA, the beer tastes less bitter.

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FETTE SAU PORK BELLY & TAVERN SPRUCE

Aroma is an important component of flavor.

We have only a handful of basic tastes yet are able to experience many thousands of different flavors. Much of this variety is due to the olfactory component of flavor.

When you eat, movements of the tongue and palate move odor molecules to the smell receptors by the back way - the retronasal pathway. But when your nostrils are pinched, air can't move between the nose and mouth.

This pairing is pleasant because the smoky fragrance of the meat is complimented by the spruce aroma in the beer.

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FETTE SAU BRISKET & ESA

ASTRINGENCY is a dry puckering feeling.

The fact that you don't need your tongue to experience it shows that astringency is a tactile rather than taste sensation. Astringent compounds such as tannins bind the lubricating proteins in your saliva and on oral membranes.

One good way to reduce this sensation is simply to salivate. An even faster way is to eat a food that contains fat. This will quickly coat your mouth and reduce astringency.

This is a successful pairing because the fat in the Brisket reduces the slight astringency of the ESA.

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HAN DYNASTY SPICY CUCUMBERS & THOMAS JEFFERSON

PLANT PRANKS

We know that capsaicin, the “hot” compound in chili peppers stimulates a receptor called TrpV1 (pronounced trip-vee-one), which stands for transient receptor potential cation channel subfamily V member 1. TrpV1 is nomally involved in sensing heat, but capsaicin tricks this pathway into being activated even though skin or mouth temperature hasn’t increased.

COLD MIGHT BE BETTER

Real or not, the burn is hard to ignore. Most people will choose beer over wine to pair with spicy foods, but experts aren’t sure why. One hypothesis is that a cold beverage will be more effective at reducing the burn than a warm beverage because lower temperatures reduce TrpV1 activity.

WARM MIGHT BE BETTER

However, nothing is simple. Carbonation is enhanced by cold temperatures and the tingle from bubbles is due to stimulation of another Trp channel, TrpA1. TrpA1 receptors are found on some of the same nerve cells as TrpV1. So maybe cold beer will be less effective than warm beer because it produces more activation of TrpA1/TrpV1 cells.

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LITTLE BABY'S TOFFEE COFFEE ICE CREAM & LOVE STOUT

LITTLE BABY'S BOURBON BOURBON VANILLA & BOURBON PORTER FLOAT

SENSORY ADAPTATION

is a decrease in sensitivity to a stimulus as a result of exposure to that stimulus. Olfactory adaptation is common – when you first walk into the house you smell dinner cooking but within minutes the aroma is greatly decreased.

A PERFUMER'S TRICK

When you first sniffed bottle A, the cinnamon was the stronger part of the mixture. By repeatedly sniffing bottle B, you adapted to the cinnamon. When you sniffed bottle A again, the vanilla was more noticeable because the cinnamon was reduced.

IS THIS A GOOD PAIRING?

The ice creams and the beers contain similar aromas – bourbon or coffee. Do they enhance each other or cancel each other out? Try putting the ice cream in the beer. Better?