Artificial Sweeteners Essay, Research Paper

Artificial sweeteners can taste wonderful to your taste buds, however can be

very dangerous to a persons health. Almost everything people consume today has

artificial sweeteners, such as Aspartame, Stevioside, Acesulfame, and Saccharin.

The artificial sweetener Aspartame (i.e. Nutrasweet), (APM) is a dipeptide. A

dipeptide is when 2 amino acids are linked together (as you know, amino acids

make up proteins). The 2 amino acids are phenylalanine and aspartic acid. There

is a certain configuration or "site" that is located on your tongue

for sweetness. If a molecule’s configuration fits that site – then you taste the

sweet taste. It is like a lock and key where your site on the tongue is the lock

and the molecule is the key. It is thought that how well the "key"

fits the "lock" is the degree to how "sweet" a molecule can

taste. APM has the right configuration – so it can taste sweet – 180X sweeter

than table sugar. APM does breakdown with heating. This is why you can’t bake

with it. Well, what is all the hype if APM is just a "mini-protein"

anyway? There are certain individuals who are born with a condition called

phenylketonuria. We are all screened for the condition at birth – this condition

is very serious. These individuals cannot consume high amounts of the amino acid

phenylalanine; otherwise they can get severe brain damage. They have to watch

all foods with this amino acid (i.e. tomatoes, cheese, etc.). Look at your diet

soda can – there is a warning to phenylketonuriacs. This is also why some

doctors tell pregnant women not to drink diet beves with APM – the effect on the

fetus is not known and the fetus may be PKU (pkenylketonuria positive). Some

individuals have claimed side effects such as migraines, etc. I believe all

individuals are different and have different sensitivities. For example – I am

allergic to sunflower seeds – I get hives. There has been a lot of research with

this food additive. It was approved for use in 1981 citing studies in humans and

animals for over 2 decades with over 100 clinical studies. In 1986, the FDA

reaffirmed its APMs safety by releasing the following after receiving pressure

from several consumer groups. "The data and information supporting the

safety of aspartame are extensive. It is likely that no food product has ever

been so closely examined for safety."

Stevioside (STV) is 300X sweeter than sugar – WOW! It is isolated from the

plant of the genus Stevia rebaudiana. It will be hard to find this out in the

market because the plant is rare (that is, compared to corn) and therefore it is

very expensive. No known side effects have been reported – but it hasn’t been

widely studied, either. Since it is naturally isolated from plants – there was

no FDA approval needed.

Acesulfame K (ACK) is approved for use in over 50 different countries; it is

200X sweeter than sugar. The FDA has approved it for some uses in the US. It is

stable to heat so it can be used in baking. Over 90 safety studies have been

carried out on ACK and has been deemed to be safe.

Saccharin (SAC): FYI if you drink diet soda at a restaurant – it is sweetened

with SAC, not APM. This is why your favorite diet soda may taste different in

the restaurant. There is proof of cancer in lab rats with VERY HIGH levels of

SAC. Also, APM is becoming available to a restaurant near you – it has been

stabilized to "survive" the soda syrups.

These are just a few of the natural artificial sweeteners approved by the

FDA, other natural sweeteners are being tested as we speak. Hopefully to be

approved, safe to our health, and still taste just as good as the ones not so

great for our health.

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