

Ideas for the use of animal blood plasma

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In Norway blood plasma is separated from beef and pig blood.

The plasma is usually frozen in square polyethylen buckets containing 15 litres.

The blood plasma is mixed into emulsion products very similar to knockwurst and other sausage items.

As it, after some experiments, was found that partly redcolour of beef plasma turned yellow upon heating instead of brown as expected, the idea arose that this might be used for making the use blood plasma more popular and thereby giving payback to the meat industry.

Pilot plant tests were carried after heating plasma in the laboratory.

The bottom of a normal kitchen frying pan was filled with butter as when frying eggs. Then beef plasma was poured into the pan in a relatively small quantity. The water in the plasma evaporates in the hot pan and more plasma is poured into the heated plasma. The plasma was then whipped in the frying pan and after some minutes it turned into an omeletlike product.

The omelet was served to a taste panel consisting of a board of directors and everybody in the panel thought it was an omelet made from normal chicken eg. The taste was like that from chicken omelet and the same nice yellow colour was seen.

The concentration of sodium reminds about that of eg omelet. During frying the physiological salt content of plasma is concentrated due to water evaporation.

In order to see if a container contains blood plasma from pigs or from beef cattle the plasma may be heated. Heated beef plasma turns, as above mentioned into yellow, but pig plasma will show a white colour.

This fact may be used for making what in Norway is called "long eggs". Concentrated blood plasma from the two different species mentioned above may be "coextruded" like how it is done today with eggolk and egwhite for making this type of "eggs" for the catering industry.

Further tests will be carried out in order to reduce the salt as well as the water content in the plasma. The plasma may be pasteurized in order to increase the shelf-life by reducing the bacteria count, and it may be filled sterile into containers. The containers may be sold in a way that tells that the content may be used as raw material for omelets, and pancakes, wafers and bakery products. The concentrated plasma may also be used in homes for "extending" ground beef and other raw materials .

It is known that bacteria counts are kept down in blood the first 24 hours. This means that the pasteurized or bacteria filtered plasma in sterile filled containers may have a relatively long shelflife under refrigeration in the shops.

It is our hope that this idea may be useful to the meat industry and the consumers also when using new heating methods like microwaves and eddy current.

It is known that for instance in USA very little, if any, blood plasma is used in sausages and similar products so the total use of it for humans is low. Perhaps the above mentioned may alter this situation.

Animal plasma for feeding piglets and small calves

The tests on this idea in order to see if any immuno effects are obtained from very fresh blood plasma, are not yet finished.

Blood plasma for dilution of semen from boars and bulls

As already mentioned blood and bloodplasma has "immuno-effects" the first 24 hours after slaughter when stored under refrigeration.

The blood cells have a spermicidal effect. By eliminating the blood cells from the blood by centrifuging, the plasma might be used for the dilution for semen from boars and bulls. Results from such test are not yet available.

The quantity of plasma which might be sold for this purpose is very limited. In Norway about 1 000 litres of eg yolk is being used each year for the dilution of semen from breeding bulls and boars.

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