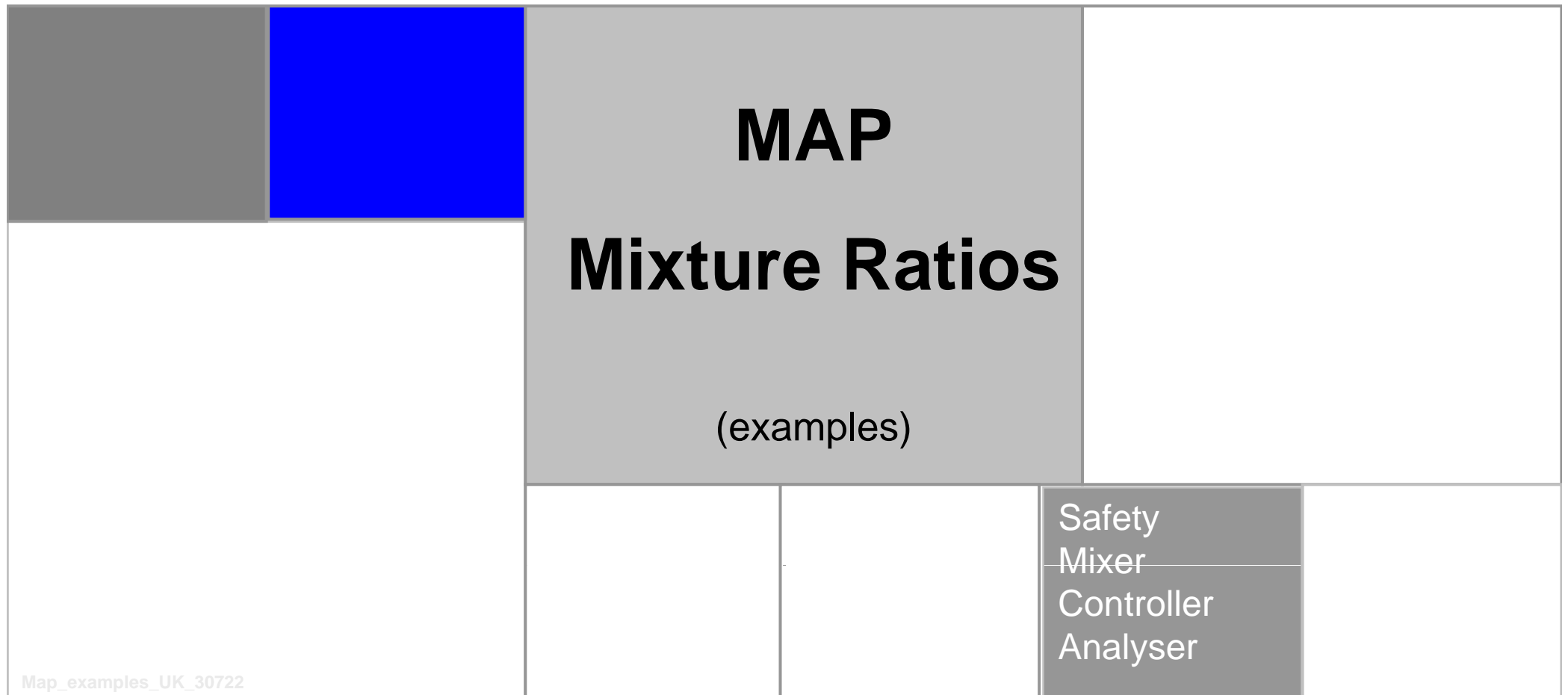


Mixing, Controlling and Analysing systems





	CO ₂
N ₂	
	O ₂

The gases used are normally:

- Carbon dioxide (CO₂) is soluble in water and fat, displaces oxygen and, in a concentration of at least 20%, works against the formation of bacteria and fungi.
- Nitrogen (N₂) displaces oxygen in the package and gives the package additional support. Nitrogen has mechanical properties preventing the product from sticking together (e.g., sliced cooked meats).
- Oxygen (O₂) is used for packaging fresh meat. It is mostly used in a mixture together with CO₂ and/or nitrogen. Oxygen in the package helps fresh meat to retain its red colour.





Advantages of MAP

- **Longer durability of perishable food**
/ Decrease of spoilage
- **Reduces the growth of germs**
- **The product retains its form and texture.**
- **The product retains its vitamin content, taste and fat content.**
- **The natural colour of the product is preserved.**
- **The need to use preserving agents is reduced if not eliminated.**
- **The longer the shelf life of the products:**
 - the more economical the use of staff and machines as goods can be held in stock
 - extended distribution
 - extended variety of delicate fresh products

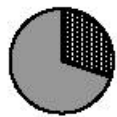


meat

Product

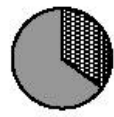
Red meat
Pork steak
Beef / venison portion

CO ₂	N ₂	O ₂
30%	-----	70%
20%	30%	50%
20%	-----	80%



■ CO₂
□ N₂
■ O₂

Retail:
70% O₂; 30% CO₂



■ CO₂
□ N₂
■ O₂

Bulk:
65% O₂; 35% CO₂

The inert gas atmospheres indicated above are merely examples and are not binding.



poultry & dairy

Product

Game
Chicken portions

Hard cheese portion

CO₂ N₂ O₂

30% 70% --

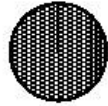
30% 50% 20%

20% 80% --



■ CO₂
□ N₂
■ O₂

Retail:
30% CO₂; 70% N₂



■ CO₂
□ N₂
■ O₂

Bulk:
100% CO₂

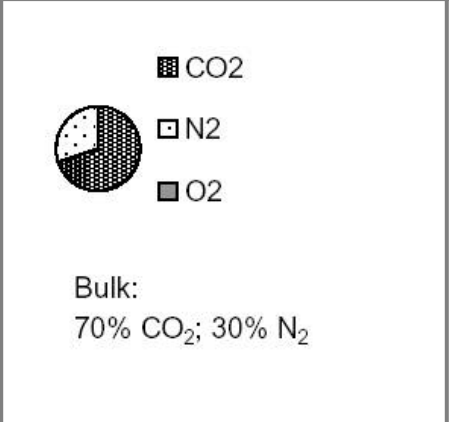
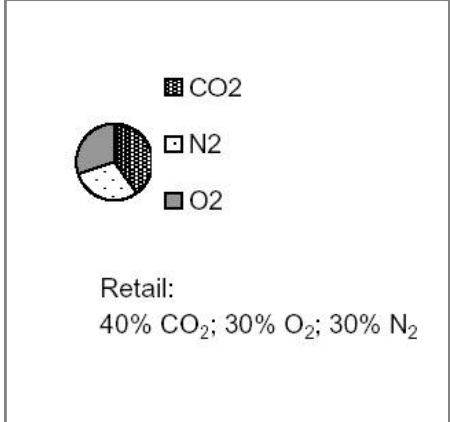
The inert gas atmospheres indicated above are merely examples and are not binding.





fish

Product	CO ₂	N ₂	O ₂
Fish	40%	30%	30%
Trout	15%	65%	20%
Plaice	40%	30%	30%



The inert gas atmospheres indicated above are merely examples and are not binding.



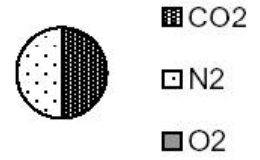
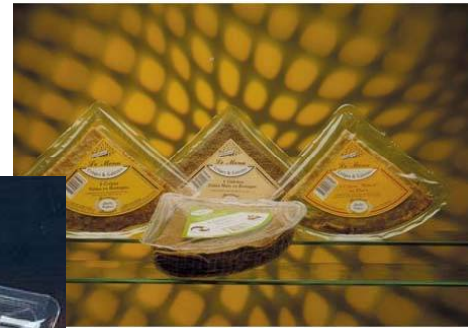


bakery

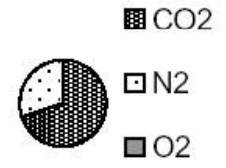
Product

- Fresh pasta
- Pre-baked rolls
- Pizza

CO ₂	N ₂	O ₂
50%	50%	--
70%	30%	--
70%	30%	--



Retail:
50% CO₂ ; 50%N₂



Bulk:
70% CO₂; 30% N₂

The inert gas atmospheres indicated above are merely examples and are not binding.





c-meat fruit & veg

Product	CO ₂	N ₂	O ₂
Processed meat rolls	30%	70%	--
Cooked ham in slices	40%	60%	--
Fried sausage	30%	70%	--
Fruit & Vegetable	5%	90%	5%
Ready-made salads	30%	50%	20%

- CO₂
- N₂
- O₂

 Retail:
 90% N₂; 5% CO₂; 5% O₂;

- CO₂
- N₂
- O₂

 Retail:
 30% CO₂; 70% N₂

- CO₂
- N₂
- O₂

 Bulk:
 90% N₂; 5% CO₂; 5% O₂;

- CO₂
- N₂
- O₂

 Bulk:
 50% CO₂; 50% N₂

The inert gas atmospheres indicated above are merely examples and are not binding.



other





Thank you !

www.wittgas.com

