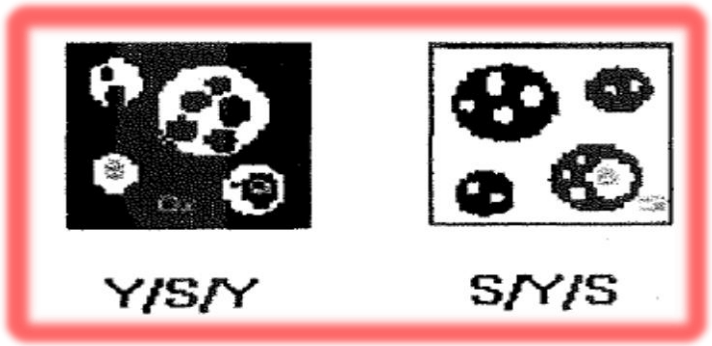
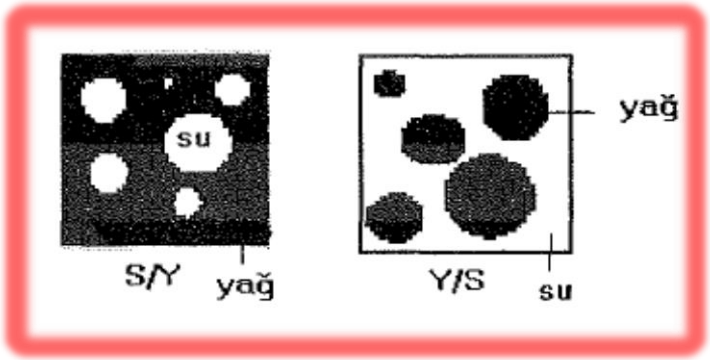
Emulsions

- **Emulsions are homogeneous heterogeneous dispersant systems formed by dispersing one or more of the at least two unmixed liquids in droplets with the help of an emulsifier.**





How should a stable emulsion be?

- During the shelf life, there should be no separation in the dispersed phase
- Redisperse should be able to return to its original state with a little rinsing and be easily homogenous
- The flow should be comfortable.

- Coalescence should not occur in internal phase in a stable pharmaceutical emulsion
- Cream should not form
- It should be able to maintain its fragrance, color, good looks and other physical properties.

As a problem with instability in a pharmaceutical emulsion;

Flocculation and creaming,

Coalescence and phase separation (breaking)

Phase transformation

Various physical and chemical changes

Three major factors influence flocculation:

Shaking intensity

Pushing force between droplets (Electrical loads between droplets pushing each other)

Van der Walls tug forces

PHASE SEPERATION

Creaming should be considered different from phase separation;

Creation recycled

Phase decomposition is irreversible.

- Globules can not be dispersed by mixing when the film surrounding the droplets is broken.

Phase decomposition;

Droplet size

Viscosity of the dispersion medium

It depends on the phase volume ratio.

The most stable emulsion comes into play when the phase to volume ratio is 50/50.

It shows a more semi-solid state. In this respect, the dispersed phase means that the stability of the emulsion is increased as soon as it is close to this.