STARTVAC®

What is Startvac?

Startvac is polyvalent inactivated vaccine against bovine mastitis in injectable emulsion. Startvac is the first mastitis vaccine and is registered in over 50 countries world wide.

Indications:

For herd immunisation of healthy cows and heifers in dairy cattle herd with recurring mastitis problems, used to reduce the incidence of sub clinical mastitis and the incidence and severity of the clinical signs of clinical mastitis caused by Staphylococcus aureus, coliforms and coagulase negative staphylococci.

How does it work?

Startvac strengthens the immunity in cows and heifers and prevents intramammory infections, reducing clinical and sub clinical mastitis against S.aureus, E,coli and other coliforms and CNS. Its mechanism of action is different for each microorganism.

E.coli and coliforms: Startvac acts by inhibiting the development of the cell all thereby preventing bacterial growth.

Startvac acts against the CORE antigen at a specific time in the growth of the wall, therefore enhancing the recognition of the natural defences for the destruction of the bacteria.

The **J5** based component of the vaccine raises antibodies to the common core of E.coli and other coliforms and enteric bacteria.

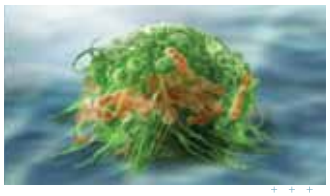
S.aureus and CNS: Startvac hinders the formation of biofilm. biofilm or Slime is a layer of exopolysaccharides that surrounds the bacteria, enhancing their growth and resistance to antibiotics.

The biofilm component of the vaccine is aimed at the "biofilm" produced by Staph. Aureus and some of the CNS family. Biofilm is a protective niche that protects bacteria against antibiotic and natural defuses helping the infection become chronic. Startvac prevents the development of biofilm and also favours contact with neutrophils enabling destruction of bacteria.

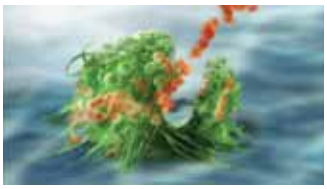
1. ATTACHMENT

2. AGGREGATION

3. GROWTH



4. DETACHMENT



INJECTABLE
EMULSION AGAINST
BOVINE MASTITIS

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Benefits of using Startvac:

According to the results from EMA registrations trials, the main benefits of startvac are:

- Reduction of the incidence of clinical and sub clinical intramammary infections up to day 130 post calving.
- Reduction in severity of symptoms of clinical cases.
- Reduction in somatic cell counts.

"Bryan et al (2016) have found it to be efficacious under NZ pastoral conditions.

Startvac is approved for use on organic farms by AsureQuality.

Dosage and method of administration:

One Dose: 2ml

Startvac is given intramuscular.

FIRST INJECTION	SECOND INJECTION	THIRD INJECTION
45 days before the expected calving date	35 days after the first injection	62 days after the second injection
	(10 days before expected calving date)	(52 days after calving date)

This complete immunization programme should be repeated each pregnancy.

Bottle Size:

50ml = 25 doses
10ml = 5 doses

References: **www.startvac.com**

Mark Bryan, Shea Yan -Hea, Elena Knupfer, Evaluation of Staphylococcus aureus vaccine in dairy cattle in NZ 2015