

1. Second Report of the Advisory Committee on the Microbiological Safety of Food on Salmonella In Eggs, 2001
2. Intervet trial, data on file
3. PHLS report, 2002
4. Davies & Breslin, Vet Record 2003, 152, 283-287
5. Clifton-Hadley et al, Salmonella & salmonellosis 2002, 619-620

Nobilis Salenvac T contains inactivated cells of *Salmonella enteritidis* phage type 4 and *Salmonella typhimurium* DT104.  
Salenvac contains inactivated cells of *Salmonella enteritidis* phage type 4.  
Both can only be prescribed by your veterinary surgeon. Legal category POM

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# Salenvac T

## The food safety vaccine

The new combined  
vaccine against  
*Salmonella enteritidis*  
and *Salmonella*  
*typhimurium* in  
poultry

NOBILIS®  
**Salenvac® T**  
*British technology for a global market*



# Salenvac T

## The food safety vaccine

**Vaccination against salmonella is mandatory for most flocks in the poultry industry – primarily to protect the consumer from food poisoning. But for retailers who seek to enhance their reputation for food safety, is simple code compliance enough?**

**The original Salenvac vaccine helped reduce human incidence of *Salmonella enteritidis* by 63%<sup>1,3</sup>. But as the Public Health Laboratory Service warns, new serotypes are constantly increasing in importance.**

**Multi-resistant *S. typhimurium* DT 104 continues to evolve resistance patterns, and is the second most common human isolate. A disturbing new trend in the Group B salmonella, *S. paratyphi* B variant Java has also emerged, with outbreaks in Scotland and 60% prevalence in poultry flocks in the Netherlands.**

**Fortunately, in the fight for food safety, retailers can request the use of new Salenvac T. As you'll see from the many unique benefits described in this brochure, no single vaccine can offer more protection to birds or consumers alike.**

## Salenvac: the only vaccine able to protect meat and eggs<sup>2</sup>

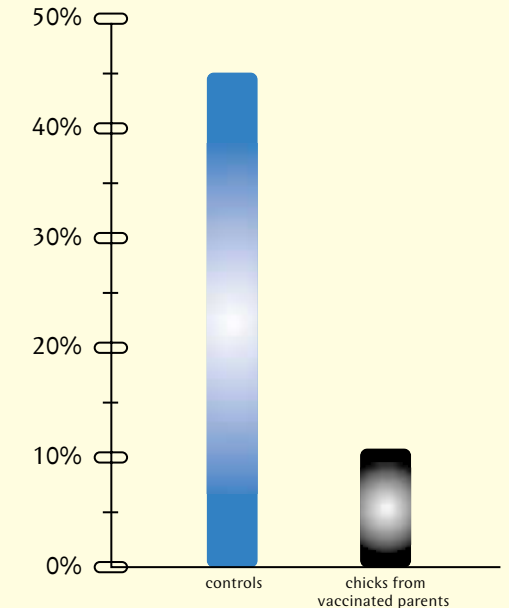
**Only Salenvac is proven to transfer passive protection between the breeder hen, her eggs and chicks. This is of vital importance if your aim is to protect eggs and broilers from salmonella, and thus to safeguard the food chain.**

Salenvac can do this because it is an inactivated injectable salmonella vaccine. Since it is administered into the body, rather than being restricted to the gut (as with live drinking water vaccines), it generates humoral antibodies which are concentrated in the eggs. The egg antibodies are then absorbed by the chick before it hatches, giving protection even before it is born. These are 'maternally-derived antibodies' (MDA) which are able to provide immunity.

This MDA against *S. enteritidis* has been demonstrated in challenge trials involving 21-day old chicks from vaccinated and unvaccinated parents.

Salenvac T is authorised to reduce horizontal transmission between birds as well as faecal shedding.

**MATERNALLY-DERIVED IMMUNITY  
PREVENTED 8 OUT OF 10 CHICK INFECTIONS**



Isolation of *S. enteritidis* from gall bladder, ovary, oviduct and caecum of chicks at post mortem after 21 days (% positive)

## One vaccine to protect against the two most dangerous salmonellae

Almost 80% of all human salmonellosis cases currently involve either *Salmonella enteritidis* or *Salmonella typhimurium*<sup>3</sup>, and they remain a continuing challenge to the poultry industry. Both organisms have been shown to survive in poultry farm environments even after depopulation and disinfection<sup>4</sup>.

**Salenvac T is the first and only multivalent salmonella vaccine for chickens. It combines the *S. enteritidis* fraction from the original Salenvac with new cover against *S. typhimurium* DT 104 – all from just two injections.**

## Salenvac T's advanced IRP vaccine technology for greater protection against natural challenge



Salmonellae grown in laboratory conditions are different from those found naturally in a chicken's intestine. This is because nutrients such as iron are less available to natural, wild bacteria. To obtain iron, they express Iron Regulated Proteins (IRPs) on their surface, which are then recognised by the chicken's immune system as antigens. If the vaccine is made with standard laboratory-grown bacteria (provided with high levels of iron), they never develop these IRPs, and the vaccine is deficient.

However, if the salmonella vaccine is manufactured with a shortage of iron, as in the wild, it allows the vaccinated chicken to produce extra antibodies against these IRPs. The IRP antibodies then provide greater protection against natural challenge.

This British-developed IRP Technology is the manufacturing process used in Salenvac T, and is unique to Intervet.





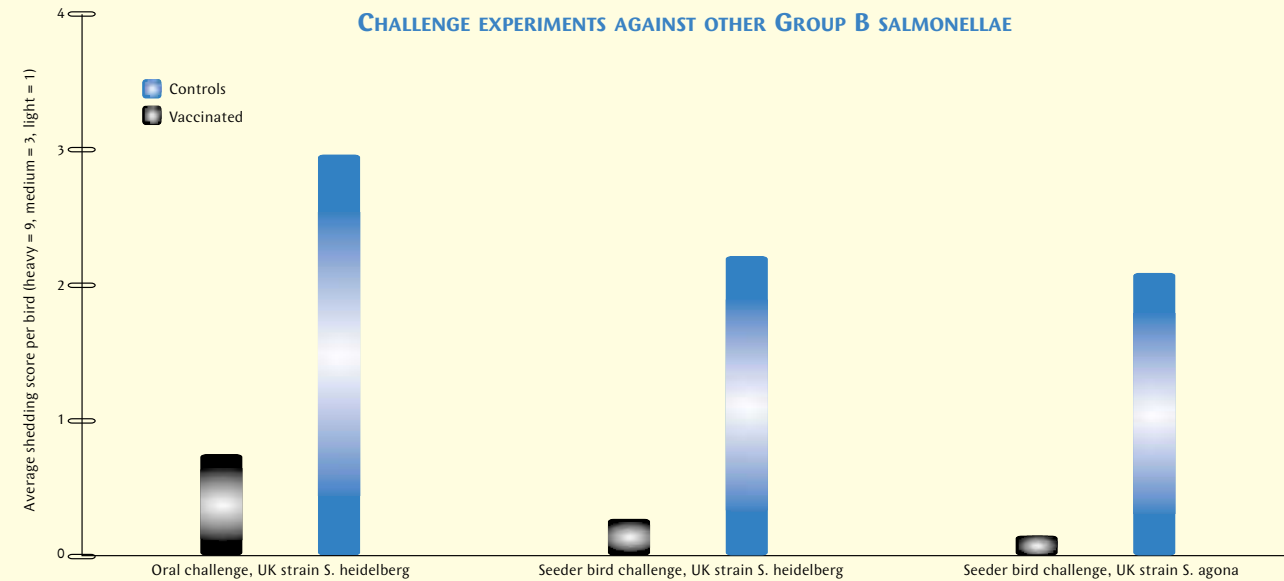
## Research update

Salenvac T and its predecessor Salenvac are two of the best researched vaccines in the industry. They have attracted many published papers, the most recent of which is summarised below.

### ***Efficacy of Salenvac T in reducing other Salmonella serogroup B infections in poultry<sup>5</sup>***

92 salmonella-free birds were vaccinated at 4 and 6 weeks of age with Salenvac T. At 8 weeks of age, groups of vaccinated and matched unvaccinated controls were challenged either orally or using seeder birds with wild-type poultry isolates of *S. heidelberg* and *S. agona* from the UK. Both salmonellae are from serogroup B, as is *S. typhimurium*.

Results were as follows:



The paper concluded that Salenvac T induces cross-protection against challenge with other salmonellae from serogroup B.

