

Simultaneous use of the frozen forms of Enterisol® Ileitis, Enterisol® SC-54, and Ingelvac® ERY-ALC

Three challenge studies were conducted to determine if the frozen forms of Enterisol® Ileitis (EI), Enterisol® SC-54 (SC-54) and Ingelvac® ERY-ALC (ERY-ALC) could successfully immunize three-week-old weaned pigs when administered simultaneously (Table 1). All vaccines were the frozen form and were administered by oral drench. All primary protective effects were measured as previously established for each disease model.

Table 1. Experimental designs for assessing interference between three oral attenuated vaccines

Results: Vaccines administered simultaneously showed significant protective effects for their respective diseases in each of the three studies. Statistically significant improvement in gross intestinal lesions from pigs vaccinated with EI/SC-54/ERY-ALC simultaneously and challenged three weeks later with *Lawsonia intracellularis* (Table 2). Statistically significant improvement in colonization of lymph nodes from pigs vaccinated with EI/SC-54/ERY-ALC

simultaneously and challenged four weeks later with *Salmonella choleraesuis* (Table 3). Statistically significant improvement in clinical signs from pigs vaccinated with EI/SC-54/ERY-ALC simultaneously and challenged three weeks later with *Erysipelothrix rhusiopathiae* (Table 4).

Summary:

1. The frozen form of Enterisol® Ileitis, Enterisol® SC-54, and Ingelvac® ERY-ALC administered simultaneously showed significant protective effects for their respective diseases in each of the three studies.
2. No interference was observed with immunization when the vaccines were administered simultaneously.

Study/Challenge organism	Treatment Groups	N	Vaccination Age	Challenge Age	Necropsy Age
Study 1					
<i>Lawsonia intercellularis</i> ¹ / Oral drench	EI/SC-54/ERY-ALC	20	3 wks	6 wks	9 wks
	Challenge controls	20	-	6 wks	9wks
	Strict controls	100	-	-	9wks
Study 2					
<i>Salmonella choleraesuis</i> ³ /Intranasal	EI/SC-54/ERY-ALC	15	3 wks	7 wks	9 wks
	SC-54	15	3 wks	7 wks	9wks
	Challenge controls	15	-	7 wks	9wks
	Strict controls	5	-	-	9wks
Study 3					
<i>Erysipelothrix rhusiopathiae</i> ³ /IM	EI/SC-54/ERY-ALC	15	3 wks	6 wks	7 wks
	SC-54	15	3 wks	6 wks	7wks
	Challenge controls	15	-	6 wks	7wks
	Strict controls	8	-	-	7wks

¹Isolate N101494, ²Strain 38, ³Strain E-1-6

Study 1	Treatment Groups		
Response Variable	EI/SC-54/ERY	Challenge CNT	Strict CNT ¹
Gross lesions	0.3 ^a	1.9 ^b	0.2

¹Strict controls not included in statistical analysis.
Means with different superscripts are considered different, P<0.05

Table 2. Mean gross lesion scores of pigs either vaccinated or non-vaccinated and challenged with *L. intracellularis*

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Table 3. Salmonella colonization of lymph nodes of pigs either vaccinated or non-vaccinated and challenged with *S. choleraesuis*

Response Variable	Treatment Groups			
	EI/SC-54/ERY	SC-54	Challenge CNT	Strict CNT ¹
Salmonella colonization of lymph nodes	20 ^a	13 ^a	87 ^b	0

¹Strict controls not included in statistical analysis.
Means with different superscripts are considered different, P<0.05

Table 4. Clinical signs of *E. rhusiopathiae* in vaccinated or non-vaccinated pigs following challenge

Response Variable	Treatment Groups			
	EI/SC-54/ERY	ERY-ALC	Challenge CNT	Strict CNT ¹
Clinically affected, %	0.0 ^a	7.0 ^a	100.0 ^b	0.0

¹Strict controls not included in statistical analysis.
Means with different superscripts are considered different, P<0.05

References

Data on file: BIVI study # 6127-0895-04P-023