Summary of Studies Supporting USDA Product Licensure

Establishment Name	Zoetis Inc.
USDA Vet Biologics Establishment Number	190
Product Code	16D1.20
True Name	Feline Rhinotracheitis-Calici-Panleukopenia Vaccine, Modified Live Virus
Tradename(s) / Distributor or Subsidiary (if different from manufacturer)	Feline Guard 3 - Zoetis Australia Pty Ltd Felocell 3 - No distributor specified Felocell 3 - Zoetis Argentina Felocell 3 - Zoetis Mexico Felocell 3 - Zoetis New Zealand Ltd Felocell 3 - Zoetis South Africa Ltd Felocell CVR - No distributor specified Felocell CVR - Zoetis (Thailand) Limited Felocell CVR - Zoetis Inc. Felocell CVR - Zoetis Industria Produtos Veterinarios Ltda. Felocell CVR - Zoetis Japan Inc. Felocell CVR - Zoetis Russia Vanguard Feline RCP - No distributor specified Zoetis Mexico
Date of Compilation Summary	July 20, 2021

Disclaimer: Do not use the following studies to compare one product to another. Slight differences in study design and execution can render the comparisons meaningless.

<table>
<tr><td>Study Type</td><td>Efficacy</td></tr>
<tr><td>Pertaining to</td><td>Feline Calicivirus</td></tr>
<tr><td>Study Purpose</td><td>Demonstrate efficacy against feline calicivirus</td></tr>
<tr><td>Product Administration</td><td>Two 1ml doses, administered subcutaneously, 3 weeks apart.</td></tr>
<tr><td>Study Animals</td><td>Study involved 20 vaccinates cats for vaccination and 10 controls. Cats at initial vaccination were 9-12 weeks of age.</td></tr>
<tr><td>Challenge Description</td><td>Feline Calicivirus challenge was administered into the nose, eyes and mouth 6 weeks after the initial vaccination.</td></tr>
<tr><td>Interval observed after challenge</td><td>During the 13-day post-challenge, all vaccinate and controls were observed for temperatures and clinical symptoms.</td></tr>
<tr><td>Results</td><td>A numerical value key was prepared for evaluating clinical symptoms and is as follows:

<table>
<tr><th>Clinical Observations</th><th>Numerical Value</th></tr>
<tr><td>Normal</td><td>1</td></tr>
<tr><td>Mouth ulcer <3 mm</td><td>2</td></tr>
<tr><td>Mouth ulcers 2-3 <3 mm, or 1 ulcer >3mm</td><td>3</td></tr>
<tr><td>More than 3 distinct ulcers, or ulcers with early erosion</td><td>4</td></tr>
<tr><td>Mouth ulcers with excessive erosion</td><td>5</td></tr>
<tr><td>Eroded mouth ulcers with bleeding and/or salivation</td><td>6</td></tr>
<tr><td>Mouth and/or nasal erosions with anorexia and depression</td><td>7</td></tr>
<tr><td>Labored breathing and/or pneumonia</td><td>9</td></tr>
<tr><td>Death</td><td>10</td></tr>
</table>

Data table is appended to end of this summary.</td></tr>
<tr><td>USDA Approval Date</td><td>9/22/1978</td></tr>
</table>

	Clinical Score By Post-Challenge Day													
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13
Vacc 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 3	1	1	1	1	1	2	2	2	3	3	2	1	1	1
Vacc 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 5	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 6	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 7	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 8	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 9	1	1	1	1	3	3	3	3	3	3	3	3	2	2
Vacc 10	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 11	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 12	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 13	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 15	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 16	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 17	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 18	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 19	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vacc 20	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Control 1	1	1	4	6	6	8	8	6	5	4	4	4	3	3
Control 2	1	1	1	2	3	3	3	3	3	3	3	2	2	2
Control 3	1	1	1	3	3	4	3	3	3	2	2	2	1	1
Control 4	1	1	1	2	2	3	3	3	3	3	3	3	3	1
Control 5	1	1	1	3	6	6	5	5	5	5	5	4	3	4
Control 6	1	1	1	2	2	2	2	2	2	2	2	2	1	1
Control 7	1	1	1	1	2	4	4	4	4	4	4	4	3	2
Control 8	1	1	1	1	6	4	4	4	4	4	3	2	1	1
Control 9	1	1	1	1	1	1	1	1	1	1	1	3	2	1
Control 10	1	1	1	3	3	3	3	3	3	3	2	2	2	2

Study Type	Efficacy
Pertaining to	Feline Rhinotracheitis Virus
Study Purpose	To demonstrate efficacy against Feline Rhinotracheitis Virus
Product Administration	Subcutaneous
Study Animals	Cats
Challenge Description	
Interval observed after challenge	
Results	Study data were evaluated by USDA-APHIS prior to product licensure and met regulatory standards for acceptance at the time of submission. No data are published because this study was submitted to USDA-APHIS prior to January 1, 2007, and APHIS only requires publication of data submitted after that date.
USDA Approval Date	February 20, 1981

Study Type	Efficacy
Pertaining to	Feline Panleukopenia virus
Study Purpose	To demonstrate efficacy against Feline Panleukopenia virus
Product Administration	Subcutaneous and intramuscular
Study Animals	Cats
Challenge Description	
Interval observed after challenge	
Results	Study data were evaluated by USDA-APHIS prior to product licensure and met regulatory standards for acceptance at the time of submission. No data are published because this study was submitted to USDA-APHIS prior to January 1, 2007, and APHIS only requires publication of data submitted after that date.
USDA Approval Date	November 21, 1979

Study Type	Efficacy
Pertaining to	Feline Panleukopenia Virus
Study Purpose	To demonstrate efficacy against Feline Panleukopenia Virus
Product Administration	
Study Animals	Cats
Challenge Description	
Interval observed after challenge	
Results	Study data were evaluated by USDA-APHIS prior to product licensure and met regulatory standards for acceptance at the time of submission. No data are published because this study was submitted to USDA-APHIS prior to January 1, 2007, and APHIS only requires publication of data submitted after that date.
USDA Approval Date	17 February, 1972

Study Type	Safety
Pertaining to	ALL
Study Purpose	Demonstrate safety of product under typical field conditions.
Product Administration	
Study Animals	Cats
Challenge Description	
Interval observed after challenge	
Results	Study data were evaluated by USDA-APHIS prior to product licensure and met regulatory standards for acceptance at the time of submission. No data are published because this study was submitted to USDA-APHIS prior to January 1, 2007, and APHIS only requires publication of data submitted after that date.
USDA Approval Date	12 December 1978