

## TZANEEN EXPERIMENT (cont.)

BLUE TONGUE IN CATTLE AND SHEEP.

Previous History.									
D.O.B.	Source.	Date of Injection.	Experiment No.	B.T.		Incubation Period.	Reaction and Duration.	Highest Temperature.	B.T. Symptoms Recorded.
				Virus.	Qual.				
41807	Karoo	21.11.34	5390	B. 961	Vacc.	5 days	** 5 days	106.0	Nil
41858	"	29.1.35	5572 ( <i>E. ovis</i> )	S. 41839	( <i>E. ovis</i> )	5 days	—	—	<i>E. ovis</i>
43870	"	21.11.34	5390	B. 960	Vacc.	4 days	** 7 days	106.0	Nil.
		29.1.35	5572 ( <i>E. ovis</i> )	S. 41839	( <i>E. ovis</i> )	—	—	—	<i>E. ovis</i>
		27.5.35	5633	S. 40873	Vacc.	—	—	—	—
44545	"	1.6.35	5633	S. 40833	Vacc.	—	*	—	—
41029	"	5.6.34	5390	B. 935	Vacc.	3 days	** 8 days	106.0	Sl.
		10.6.35	5390	S. 40980	Bekker	—	—	—	—
44186	"	25.5.35	5633	S. 40833	Vacc.	6 days	** 3 days	106.0	—
37175	"	24.4.33	4997	S. 34068	Vacc.	6 days	**	—	—
		11.1.34	5134 (H.W.)	S. 37429	(H.W.)	—	—	—	<i>E. ovis</i>
40972	"	5.6.34	5390	B. 935	Vacc.	4 days	** 6 days	106.0	Sl.
		10.6.35	5390	S. 40980	Bekker	—	*	—	—
40933	"	17.8.34	5291	S. 41105, 40950	Vacc.	4 days	** 7 days	106.0	Sl.
42768	"	15.4.35	5633	S. 40626	Vacc.	6 days	**	107.0	—
41819	"	21.11.34	5390	B. 967	Vacc.	5 days	** 5 days	106.0	—
		29.1.35	5572 ( <i>E. ovis</i> )	S. 41839	( <i>E. ovis</i> )	—	—	—	<i>E. ovis</i>
		11.6.35	5688 (H.W.)	S. 42907	(H.W.)	—	—	—	—
43209	"	4.5.35	5633	S. 40873	Vacc.	6 days	** 2 days	105.6	—
43292	"	30.4.35	5633	S. 40873	Vacc.	6 days	**	106.4	Nil
41090	"	5.6.34	5390	B. 935	Vacc.	5 days	** 6 days	106.0	Sl.
		10.6.35	5390	S. 40980	Bekker	—	—	—	—
44242	"	20.5.35	5633	S. 40833	Vacc.	—	—	—	—
43349	"	9.5.35	5633	S. 40873	Vacc.	(?)	**	105.4	Nil
43634	"	8.5.35	5633	S. 40873	Vacc.	6 days	**	106.0	Nil
41104	"	5.6.34	5390	B. 937	Vacc.	5 days	** 5 days	105.8	Sl.
		10.6.35	5390	S. 40980	Bekker	—	—	—	—
43336	"	4.5.35	5622	S. 40873	Vacc.	7 days	**	105.0	Nil
44233	"	28.5.35	5633	S. 40833	Vacc.	5 days	**	107.0	Nil
42892	"	17.4.35	5633	S. 40626	Vacc.	—	—	—	—
43298	"	30.4.35	5633	S. 40873	Vacc.	—	*	—	—
43831	"	12.6.35	5657	Brain	G.pig	11 days	* 2 days	106.0	—
		2.8.35	5657	S. 43910	Mouse	6 days	** 4 days	106.0	—
43313	"	4.5.35	5633	S. 40873	Vacc.	7 days	**	107.6	—
42174	"	27.3.35	5633	S. 40626	Vacc.	6 days	**	106.2	Nil
42696	"	9.4.35	5633	S. 40626	Vacc.	6 days	**	106.0	Nil
43481	"	8.5.35	5633	S. 40873	Vacc.	—	*	—	—
42738	"	17.4.35	5633	S. 40626 * North am.	Vacc.	—	—	—	—
43663	"	8.5.35	5633	S. 40873	Vacc.	6 days	** not compl.	106.8	—
42676	"	17.4.35	5633	S. 40626	Vacc.	—	—	—	—
43660	"	11.5.35	5633	S. 40873	Vacc.	—	*	105.0	—
44209	"	25.5.35	5633	S. 40833	Vacc.	7 days	** not compl.	105.4	—
44297	"	28.5.35	5633	S. 40833	Vacc.	—	*	—	—
42698	"	9.4.35	5633	S. 40626	Vacc.	6 days	** not compl.	106.4	—
		6.5.35	5688 (H.W.)	Exposed North am.	—	—	—	—	—
42695	"	17.4.35	5633	S. 40626	Vacc.	7 days	** not compl.	105.0	—
43761	"	22.5.35	5657	G.pig 27	—	—	—	—	—
		2.8.35	5657	S. 41583	(A. pig, Adrenal)	—	*	—	—
		11.9.35	5657	S. 40633	Bekker	—	*	—	—

## Experiment with Tzaneen Virus.

Interval between B.T. and Tzaneen (days.)	Date of Injection.	Experiment No.	Tzaneen Virus.	Incubation Period.	Reaction and Duration.	Highest Temperature.	B.T. Symptoms Recorded.	Result.
218	27. 6.35	5700	S. 40955	—	—	—	—	—
218	27. 6.35	5700	S. 40955	—	—	—	—	—
72	7. 8.35	5773	S. 41807	2 days	*** 10 days	107.4	Definite	—
72	7. 8.35	5773	S. 41807	2 days	** 2 days	108.0	Nil	—
434	13. 8.35	5737	C. 5563	1 day	** 2 days	107.0	Nil	—
80	13. 8.35	5737	C. 5563	2 days	* 2 days	107.0	Nil	—
863	15. 8.35	5737	C. 5563	1 day	** 6 days	107.2	Nil	—
435	15. 8.35	5737	C. 5563	1 day	** 5 days	106.6	Nil	—
361	13. 8.35	5737	S. 43870, 44545	1 day	*** 8 days	108.0	Nil	—
120	13. 8.35	5737	S. 43870, 44545	1 day	** 4 days	107.2	Nil	—
264	13. 8.35	5746	S. 44545	1 day	** 5 days	107.0	SL.	—
101	13. 8.35	5746	S. 44545	2 days	** 5 days	107.0	Nil	—
105	13. 8.35	5746	S. 44545 Berkefeld filtr.	3 days	** 4 days	106.4	Nil	—
440	19. 8.35	5737	C. 5563	1 day	** 7 days	107.2	Nil	—
91	19. 8.35	5737	C. 5563	1 day	** 4 days	106.2	Nil	—
106	22. 8.35	5737	C. 5563	3 days	** 5 days	107.0	Nil	—
106	22. 8.35	5737	C. 5563	3 days	** 3 days	107.4	Nil	—
440	19. 8.35	5773	S. 40933	2 days	** 5 days	106.6	Nil	—
117	29. 8.35	5737	C. 5563	1 day	** 7 days	106.0	Nil	—
90	26. 8.35	5773	S. 41104	1 day	** 4 days	107.0	Nil	—
103	29. 8.35	5772	C. 4283	—	—	—	—	—
125	2. 9.35	5737	C. 5563	2 days	** 5 days	105.8	Nil	—
78	29. 8.35	5772	C. 4283	—	—	—	—	—
121	2. 9.35	5737	C. 5563	2 days	** 5 days	106.2	Nil	—
168	11. 9.35	5737	C. 5553	2 days	*** 6 days	107.4	SL.	—
154	11. 9.35	5737	C. 5553	2 days	** 5 days	107.0	SL.	—
124	9. 9.35	5773	S. 45005 (see Susc. Chart)	1 day	** 5 days	108.0	Nil	—
150	13. 9.35	5773	S. 43481	1 day	** 5 days	105.8	Definite	—
133	18. 9.35	5737	S. 5563	—	—	—	—	—
100	26. 7.35	5726	S. 40994 (Tz. 1934)	—	—	—	—	—
66	26. 7.35	5726	S. 40994 (Tz. 1934)	—	—	—	—	—
62	26. 7.35	5726	S. 40994 (Tz. 1934)	—	—	—	—	—
49	26. 7.35	5726	S. 40994 (Tz. 1934)	3 days	** 2 days	107.0	Nil	—
164	20. 9.35	5773	S. 42738	3 days	** Abortive 3 days	105.2	Nil	—
—	23. 9.35	5774	S. 42738	—	—	—	—	—
—	23. 9.35	5774	S. 42738	—	—	—	—	—
—	23. 9.35	5774	S. 42738	—	—	—	—	—
167	1.10.35	5746	S. 44983 (see Susc. Chart)	3 days	** 7 days	107.0	Nil	—
132	1.10.35	5746	S. 44983 (see Susc. Chart)	6 days	* 4 days	104.8	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

## TZANEEN EXPERIMENT (cont.)

G. DE KOCK, R. DU TOIT, AND W. O. NEITZ.

Subsequent History.									
Interval between Tz. Inj. and Test. (days.)	Date of Injection.	Experiment No.	Virus.		Incubation Period.	Reaction and Duration.	Highest Temperature.	B.T. Symptoms Recorded.	Result.
			Orig.	Qual.					
29	26. 7. 35	5700	S. 40943	Tz.	3 days	* * * 5 days	107.4	Definite	—
29	26. 7. 35	5700	S. 40943	Tz.	1 day	* * 5 days	107.6	Nil, <i>E. ovis</i>	—
39	18. 9. 35	5773	S. 42174	Tz. (see Susc. Chart)	—	—	—	—	—
40	28. 10. 35	5782	S. 44995	Tz.	7 days	* * abortive 2 days	105.0	Nil	—
39	18. 9. 35	5782	S. 24174	Tz. (see Susc. Chart)	—	—	—	—	—
40	28. 10. 35	5782	S. 44995	Tz.	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
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—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
52	4. 10. 35	5782	S. 43835	Tz.	—	—	—	—	—
4	8. 10. 35	5782	S. 42695	Tz.	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
52	4. 10. 35	5782	S. 43835	Tz.	—	—	—	—	—
4	8. 10. 35	5782	S. 42695	Tz.	—	—	—	—	—
52	4. 10. 35	5782	S. 43835	Tz.	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
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—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
42	23. 10. 35	5782	S. 44995	Tz.	1 day	* * 2 days	107.2	Nil	—
42	23. 10. 35	5782	S. 44995	Tz.	—	*	—	Nil	—
49	28. 10. 35	5782	S. 44995	Tz.	7 days	* * Abortive 2 days	106.0	Nil	—
—	—	—	—	—	—	*	—	—	—
45	28. 10. 35	5782	S. 44995	Tz.	—	*	—	—	—
35	23. 10. 35	5792	S. 44995	Tz.	± 24 hrs.	* * 5 days	107.4	Symptoms	—
55	20. 9. 35	5726	S. 42738	Tz.	5 days	* * 2 days	106.8	Nil	—
65	20. 9. 35	5726	S. 42738	Tz.	4 days	* * 5 days	105.4	Nil	—
55	20. 9. 35	5726	S. 42738	Tz.	—	*	—	—	—
65	20. 9. 35	5726	S. 42738	Tz.	2 days	* * 3 days	106.8	Nil	—
38	28. 10. 35	5782	S. 44995	Tz.	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
42	4. 11. 35	5774	S. 44993	Tz.	—	—	—	—	—
42	4. 11. 35	5774	S. 44993	Tz.	—	—	—	—	—
42	4. 11. 35	5774	S. 44993	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
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—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

BLUE TONGUE IN CATTLE AND SHEEP.

D.O.B.	Source.	Date of Injection.	Experiment No.	Previous History.		Incubation Period.	Reaction and Duration.	Highest Temperature.	B.T. Symptoms Recorded.
				B.T.					
				Virus.	Qual.				
43678	Karoo	8. 7.35	5657	G.pig Brain	—	—	—	—	—
		8. 8.35	5657	Mice Brain, etc.	—	—	—	—	—
		21. 8.35	5751	S. 43920 Brain	—	—	*	—	—
43882	..	11. 9.35	5751	Mouse	—	—	—	—	—
		3. 6.35	5657	S. 40633	Bekker	—	—	—	—
		22. 7.35	5657	Mouse Brain	—	—	—	—	—
43835	..	12. 8.35	5751	Mouse Brain	—	6 days	** 3 days	106.0	—
		14. 9.35	—	S. 43721 Brain	—	—	—	—	—
		29. 5.35	5657	G.pig	Bekker	—	—	—	—
43690	..	6. 5.35	5633	S. 40633	—	—	—	—	—
		13. 5.35	5633	G.pig Brain	—	—	—	—	—
		9. 4.35	5633	Mouse Brain	—	—	—	—	—
43229	..	4. 5.35	5633	Mouse Brain	—	—	—	—	—
		14. 5.35	5633	Mouse Brain	—	—	—	—	—
		29. 5.35	5633	Rabbit Brain	—	7 days	** 2 days	106.0	—
43751	..	29. 5.35	5633	S. 40633	Bekker	—	—	—	—
		11. 5.35	5633	S. 40633	—	—	—	—	—
		8. 5.35	5633	S. 42705	Egg Vs.	—	—	—	—
44555	..	2. 8.35	5707	S. 43910	Vacc.	—	—	—	—
		6. 5.35	5633	S. 40873	Vacc.	6 days	** 3 days	107.0	Nil
		13. 5.35	5633	S. 40873	Vacc.	—	*	—	—
42504	..	9. 4.35	5633	S. 40626	Vacc.	5 days	** not compl.	106.4	—
		4. 5.35	5633	S. 40873	Vacc.	—	*	—	—
		14. 5.35	5633	S. 40873	Vacc.	3 days(?)	**	105.4	—
44228	..	29. 5.35	5633	S. 40833	Vacc.	—	—	—	—
		11. 5.35	5633	S. 40873	Vacc.	(?)	**	107.0	—
		8. 5.35	5633	S. 40873	Vacc.	5 days	**	106.6	—
43617	..	18. 5.35	5633	S. 40873	Vacc.	(?)	** Irreg.	106.6	—
		29. 5.35	5633	S. 40833	Vacc.	5 days	** Irreg.	105.0	—
		28. 5.35	5633	S. 40833	Vacc.	—	—	—	—
44105	..	25. 5.35	5633	S. 40833	Vacc.	(?)	* (?) Irreg.	—	—
		25. 5.35	5633	S. 40833	Vacc.	9 days(?)	* (?)	—	—
		27. 11.35	5812	S. 44992, 45008	Novo.	7 days	** 8 days	106.0	—
44120	..	27. 5.35	5633	S. 40873	Vacc.	7 days	** Irreg.	107.0	—
		25. 5.35	5633	S. 40833	Vacc.	(?)	* (?)	104.6	—
		27. 11.35	5812	S. 44992, 34008	Novo	4 days	* 3 days	106.0	—
44140	..	27. 5.35	5633	S. 40873	Vacc.	8 days(?)	* Irreg.	105.0	—
		20. 5.35	5633	S. 40833	Vacc.	—	—	—	—
		6. 12.35	5812	S. 45336, 41890	Novo	6 days(?)	* (?)	—	—
45370	..	17. 12.35	5812	S. 45370	Novo	3 days	** 7 days	107.0	—
		5. 5.34	5353	S. 39152	Vacc.	—	—	—	—
		30. 12.35	5807	S. 44992	Novo.	—	—	—	—
45355	..	13. 1.36	5812	S. 44992	Novo	—	—	—	—
		9. 12.35	5826	Bld. cattle Nelsr ust	—	—	—	—	—
		8. 1.36	5842	S. 45333	Novo	—	—	—	—
45366	..	27. 1.36	5773	S. 44992	Novo	—	—	—	—
		1. 6.36	5633	S. 40833	Vacc.	—	—	—	—
		25. 5.35	5633	S. 40833	Vacc.	—	—	—	—
45428	..	1. 6.36	5633	S. 40833	Vacc.	—	—	—	—
		25. 5.35	5633	S. 40833	Vacc.	—	—	—	—
		25. 5.35	5633	S. 40833	Vacc.	—	—	—	—

## TZANEEN EXPERIMENT 1935 (continued).

(BLUE-TONGUE IMMUNE SHEEP.)

Experiment with Tzaneen Virus.								
Interval between B.T. and Tzaneen (days.)	Date of Injection.	Experiment No.	Tzaneen Virus.	Incubation Period.	Reaction and Duration.	Highest Temperature.	B.T. Symptoms Recorded.	Result.
85	2.10.35	5737	C. 5563	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
121	2.10.35	5737	C. 5563	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
124	30. 9.35	5773	S. 42698	2 days	** 4 days	106.6	Nil	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
87	1.10.35	5746	S. 44983 (see Susc. Chart) Filtrate	3 days	** 4 days	107.4	Nil	—
—	—	—	—	—	—	—	—	—
150	4.10.35	5774	H. 20989	—	—	—	—	—
143	4.10.35	5774	H. 20989	—	—	—	—	—
192	8.10.35	5746	S. 42695	1 day	** 7 days	107.2	—	—
157	8.10.35	5773	S. 43835	2 days	** 5 days	106.4	—	—
192	22.11.35	5816	S. 44977	2 days	** 7 days	106.6	Sl.	—
177	22.11.35	5816	S. 44977	2 days	** 4 days	107.0	Sl.	—
237	3. 1.36	5839	S. 40948, 40964	2 days	** 5 days	107.0	—	—
240	3. 1.36	5839	S. 40948, 40964	1 day	** 6 days	107.0	—	—
226	30.12.35	5838	S. 45341	± 24 hrs.	** 9 days	106.8	V. sl.	—
226	30.12.35	5838	S. 45341	± 24 hrs.	** 11 days	108.2	V. sl.	—
216	30.12.35	5838	S. 45341	± 24 hrs.	** 12 days	107.0	V. sl.	—
219	30.12.35	5838	S. 45341	2 days	** 9 days	106.6	V. sl.	—
219	30.12.35	5838	S. 45341	± 24 hrs.	* Irreg. 5 days	105.0	Sl.	—
44	10. 1.36	5845	S. 41531 (supern. fld.)	—	—	—	—	—
—	—	—	—	—	—	—	—	—
228	10. 1.36	5845	S. 41531 (supern. fld.)	Very late R 21 days	** Irreg. 9 days	106.0	—	—
230	10. 1.36	5845	S. 41531 (supern. fld.)	—	—	—	—	—
44	10. 1.36	5845	S. 41531 (Bld. deposit)	—	—	—	—	—
—	—	—	—	—	—	—	—	—
228	10. 1.36	5845	S. 41531 (Bld. deposit)	—	—	—	—	—
235	10. 1.36	5845	S. 41531 (defib. bld.)	2 days	** 6 days	107.2	—	—
35	10. 1.36	5845	S. 41531 (defib. bld.)	—	—	—	—	—
38	24. 1.36	5855	S. 45349 (supern. fld.)	3 days	** 4 days	108.0	—	—
—	—	(Expt. not correctly carried out)	—	—	—	—	—	—
—	3. 2.36	5866	S. 45007 (cult. of org.)	—	—	—	—	—
—	20. 2.36	5883	S. 44986 (Bld.)	—	—	—	—	—
—	20. 2.36	5883	S. 44986 (Bld.)	2 days	** 7 days	106.6	—	—
—	20. 2.36	5883	S. 44986 (Bld.)	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	20. 2.36	5883	S. 44986 (Bld.)	24 hrs.	** 11 days	106.6	—	—
—	16. 3.36	5903	S. 45423 (Bld.)	1 day	** 6 days	107.0	—	—
—	16. 3.36	5903	S. 45729 (Bld.)	3 days	** 6 days	107.2	—	—

## Subsequent History.

Interval between Tz. Inj. and Test. (days.)	Date of Injection.	Experi- ment No.	Virus.		Incuba- tion Period.	Reaction and Duration.	Highest Tempera- ture.	B.T. Symptoms Recorded.	Result.
			Orig.	Qual.					
21	23.10.35	5792	S. 44995	Tz.	1 day	** 4 days	106.8	Nil	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
21	23.10.35	5792	S. 44995	Tz.	± 24 hrs.	** 8 days	106.4	Sl.	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
31	4.11.35	5774	S. 44993	Tz. (see Susc. Chart)	± 24 hrs.	** 4 days	107.8	Nil	—
31	4.11.35	5774	S. 44993	Tz. (see Susc. Chart)	± 24 hrs.	** 5 days	107.4	Nil	—
—	—	—	—	—	—	—	—	—	—
63	24.1.36	5855	S. 45349	Laked bld. filtr. Tz.	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
14	24.1.36	5855 Expt. not correctly carried out	S. 45349	Tz.	3 days	** 8 days	107.0	—	—
—	—	—	—	—	—	—	—	—	—
17	27.1.36	5855 Expt. not correctly carried out	S. 45349	Tz.	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	16.3.36	5903	S. 45423 (Bld.)	Tz.	3 days	**	107.6	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

Experiment with Tzaneen Virus.

D.O.B.	Source.	Date of Injection.	Experiment No.	Tzaneen Virus.	Incubation Period.	Reaction.	Duration of Reaction.	Highest Temperature.	B.T. Symptoms Recorded.
41741	Karoo	12. 3. 35	5611	C. 5742.....	—	—	—	—	—
41842	"	14. 3. 35	5611	C. 5665, 5748.....	—	*	—	—	—
41748	"	18. 3. 35	5611	S. 41768.....	4 days	** irregular	—	107.4	Definite
42359	"	30. 3. 35	5611	S. 41748.....	4 days	** irregular	—	107.2	—
42436	"	10. 4. 35	5611	S. 42359.....	1 day	** irregular	6 days	106.8	Irregular
42532	"	17. 4. 35	5611	S. 42436.....	4 days	* irregular	—	—	—
42526	"	2. 5. 35	5611	S. 42436 (Organ emuls.) = brain	±24 hrs.	**	4 days	106.0	—
42493	"	7. 5. 35	5611	S. 42526 (Brain emuls.).....	1 day	**	6 days	105.0	—
42884	"	10. 5. 35	5674	S. 41833 (Brain emuls.).....	3 days	**	4 days	105.0	—
45005	"	31. 8. 35	5773	S. 44233.....	1 day	**	8 days	107.8	Definite
44983	"	18. 9. 35	5737	C. 5563.....	5 days	**	7 days	106.4	—
44974	"	23. 9. 35	5774	S. 42738.....	6 days	**	2 days	107.0	—
44981	"	23. 9. 35	5774	S. 42738.....	6 days	**	2 days	107.0	Slight
44991	"	23. 9. 35	5774	S. 42738.....	4 days	**	7 days	107.0	Definite
45001	"	23. 9. 35	5774	S. 42738.....	—	—	—	—	—
45003	"	23. 9. 35	5774	S. 42738.....	—	*	—	105.0	—
45010	"	23. 9. 35	5774	S. 42738.....	3 days	**	6 days	106.8	Slight
44995	"	19. 10. 35	5773	S. 43229.....	1 day	***	9 days	106.0	Marked
44993	"	28. 10. 35	5773	S. 44995.....	1 day	*** irregular	6 days	106.6	Marked
44994	"	4. 11. 35	5773	S. 44993.....	1 day	***	8 days	106.0	Definite
44977	"	13. 11. 35	5773	S. 44994.....	1 day	*** irregular	±3 weeks	106.0	Definite
44986	"	11. 11. 35	5801	S. 43870, 43481.....	—	—	—	—	—
44988	"	11. 11. 35	5801	S. 43870, 43481.....	—	—	—	—	—
44989	"	13. 11. 35	5805	S. 41566, 41768, 41002.....	1 day	** irregular	10 days	106.6	Definite
45004	"	13. 11. 35	5805	S. 41566, 41768, 41002.....	7 days	**	5 days	106.0	Definite
41709	"	22. 11. 35	5805	S. 41566 (4. 3. 35).....	±24 hrs.	** irregular	9 days	107.0	—
41791	"	22. 11. 35	5805	S. 41566 (4. 3. 35).....	2 days	** irregular	9 days	106.2	—
41722	"	22. 11. 35	5816	S. 44977.....	1 day	*** continuous	Till death	106.4	Marked
41762	"	22. 11. 35	5816	S. 44977.....	1 day	***	17 days	107.4	Marked
45343	"	30. 11. 35	5773	S. 41722, 41762.....	1 day	*** irregular	Till death	108.0	Definite
45337	"	9. 12. 35	5773	S. 45343.....	1 day	*** continuous	Till death	107.0	Definite
45375	"	9. 12. 35	5805	S. 41709, 41791 (2. 12. 35).....	1 day	** irregular	12 days	106.0	Slight
45341	"	18. 12. 35	5805	S. 45375.....	2 days	***	11 days	105.0	Definite
44985	"	30. 2. 35	5838	S. 45341.....	±24 hrs.	** irregular	Till death	107.0	Definite
45371	"	16. 12. 35	5773	S. 45337.....	1 day	*** continuous	Till death	107.0	Definite
45007	"	30. 12. 35	5773	S. 45337.....	±24 hrs.	***	—	108.2	Definite
44972	"	30. 12. 35	5773	S. 45371.....	1 day	** irregular	—	106.4	Definite
40275	"	3. 1. 36	5807	S. 44977 (Bld.).....	7 days	** irregular	9 days	107.0	Compl. Anaemia
45435	"	10. 1. 36	S. 5848	S.41531 (Supern. fld.).....	—	—	—	—	—
45443	"	10. 1. 36	S. 5848	S. 41531 (Supern. fld.).....	—	—	—	—	—
45440	"	10. 1. 36	S. 5848	S. 41531 (Bld. deposit).....	—	—	—	—	—
45415	"	10. 1. 36	S. 5845	S. 41531 (Def. bld.).....	1 day	** irregular	10 days	107.0	Definite
45347	"	18. 1. 36	S. 5703	S. 45371.....	4 days	**	6 days	106.6	V. slight
45423	"	18. 1. 36	S. 5773	S. 45371.....	3 days	**	9 days	106.2	V. slight
45349	"	18. 1. 36	S. 5805	S. 45341.....	1 day	**	12 days	107.0	Slight
45369	"	18. 1. 36	S. 5805	S. 45341.....	2 days	***	6 days	107.0	Definite
45409	"	24. 1. 36	S. 5855	S. 45349 (Fil. laked bld.).....	1 day	**	9 days	107.2	—
45403	"	24. 1. 36	S. 5855	S. 45349 (Def. bld.).....	1 day	** irregular	11 days	107.0	—
45422	"	24. 1. 36	S. 5855	S. 45349 (Def. bld.).....	3 days	**	3 days	105.2	—
45445	"	24. 1. 36	S. 5855	S. 45349 (Bld. deposit).....	1 day	***	8 days	107.0	Acute B.T.
45420	"	24. 1. 36	S. 5855	S. 45349 (Supern. fld.).....	1 day	***	5 days	107.0	Acute B.T.
45404	"	11. 2. 36	S. 5845	S. 45409 (Bld.).....	1 day	**	8 days	106.0	—
45734	"	18. 2. 36	S. 5880	S. 45443, 45404 (Washed deposit)	4 days	**	5 days	107.0	Definite
45753	"	18. 2. 36	S. 5880	S. 45443, 45404 (Washed deposit)	3 days	**	6 days	107.0	Definite
45731	"	18. 2. 36	S. 5880	S. 45443, 45404 (Plasma and red cells)	3 days	**	5 days	107.0	Definite
45717	"	18. 2. 36	S. 5880	S. 45443, 45404 (Plasma ans red cells)	3 days	**	10 days	106.2	—
45727	"	18. 2. 36	S. 5880	S. 45443, 45404 (Bld.).....	2 days	***	5 days	107.0	Definite
45741	"	18. 2. 36	S. 5880	S. 45443, 45404 (Bld.).....	2 days	***	6 days	106.0	Definite
45739	"	18. 2. 36	S. 5880	S. 45443, 45404 (Supern. fld.).....	4 days	**	8 days	107.0	—
45758	"	18. 2. 36	S. 5880	S. 45443, 45404 (Supern. fld.).....	8 days	**	2 days	106.0	—
45718	"	27. 2. 36	S. 5890	S. 45731 (Supern. fld.).....	—	—	—	—	—
45728	"	27. 2. 36	S. 5890	S. 45731 (Supern. fld.).....	—	—	—	—	—
45732	"	27. 2. 36	S. 5890	S. 45731 (Supern. fld.).....	4 days	**	6 days	107.6	—
45751	"	27. 2. 36	S. 5890	S. 45731 (Supern. fld.).....	6 days	*	7 days	105.4	—
45729	"	27. 2. 36	S. 5890	S. 45731 (Supern. fld.).....	5 days	**	7 days	107.4	—
45742	"	27. 2. 36	S. 5890	S. 45731 (Supern. fld.).....	5 days	**	9 days	107.2	—
45759	"	27. 2. 36	S. 5890	S. 45731 (Supern. fld.).....	5 days	**	6 days	106.4	—
45719	"	27. 2. 36	S. 5890	S. 45731 (Deposit).....	—	—	—	—	—
45743	"	27. 2. 36	S. 5890	S. 45731 (Deposit).....	—	—	—	—	—
45745	"	16. 3. 36	S. 5903	S. 45423 (Bld.).....	1 day	**	5 days	106.0	Definite
45752	"	16. 3. 36	S. 5903	S. 45423 (Bld.).....	1 day	**	6 days	106.0	Definite
45726	"	16. 3. 36	S. 5903	S. 45729 (Bld.).....	3 days	***	8 days	107.4	Slight.
45757	"	16. 3. 36	S. 5903	S. 45729 (Bld.).....	1 day	***	5 days	106.2	Definite
45754	"	20. 3. 36	S. 5908	S. 44594 (Bld.).....	5 days	**	7 days	107.0	—
45748	"	20. 3. 36	S. 5908	S. 44594 (Bld.).....	2 days	**	6 days	107.4	Definite
45744	"	20. 3. 36	S. 5908	S. 40097 (Bld.).....	3 days	**	4 days	105.8	Definite
45746	"	20. 3. 36	S. 5908	S. 40097 (Bld.).....	5 days	**	6 days	106.0	—

B.T. Symptoms Recorded.	Result.
—	—
—	—
Definite	—
—	K.O. 13/4/35.
Irregular	K.E. 2/5/35; sequel B.T.
—	—
—	D. 7/5/35; died on 4th day; sequel inoculation brain emulsion.
—	D. 13/7/35; died on 6th day; peritonitis; sequel inoculation brain emulsion.
—	D. 15/5/35; died on 4th day, peritonitis; sequel inoculation brain emulsion.
Definite	D. 8/9/35; B.T.
—	—
—	K.E. 14/10/35; sequel B.T.
Slight	—
Definite	D. 6/10/35; B.T.
—	—
—	—
Slight	—
Marked	D. 29/10/35; B.T.
Marked	K.E. 7/11/35; B.T.
Definite	D. 13/11/35; B.T.
Definite	—
—	—
—	—
Definite	—
Definite	—
—	—
—	—
Marked	D. 1/12/35; acute B.T.
Marked	K.E. 9/12/35; sequel B.T.
Definite	D. 9/12/35; B.T.
Definite	D. 16/12/35; B.T.
Slight	—
Definite	D. 26/12/35; B.T.
Definite	K.E. 10/1/36; sequel B.T.
Definite	D. 22/12/35; sequel complications (?).
Definite	D. 4/1/36; B.T.
Definite	K.E. 10/1/36; sequel B.T.
Compl.	—
Anaemia	—
—	—
—	—
Definite	D. 23/1/36; B.T. complicated with haemonchosis.
V. slight	—
V. slight	—
Slight	—
Definite	D. 26/1/36; B.T.
—	—
—	—
Acute B.T.	D. 2/2/36; B.T.
Acute B.T.	D. 1/2/36; B.T.
—	—
Definite	K.E. 2/3/36; sequel B.T.
Definite	D. 28/2/36; B.T.
Definite	K.E. 2/3/36; sequel B.T.
—	—
Definite	K.E. 2/3/36; sequel B.T.
Definite	D. 26/2/36; B.T.
—	—
—	—
—	—
—	—
—	—
—	—
—	—
—	—
—	—
—	—
—	—
—	—
Definite	D. 23/3/36; B.T.
Definite	D. 25/3/36; B.T.
Slight.	—
Definite	D. 24/3/36; B.T.
—	—
Definite	D. 30/3/36; B.T.
Definite	D. 26/3/36; B.T.
—	—





APPENDIX III.  
PATHOLOGY.

G. DE KOCK, R. DU TOIT, AND W. O. NEITZ.

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
41801	16165	5611	Vacc. Imm.	Tz. Vs. Bovine	Killed during blue tongue reaction for collection of specimens	Periphrlebitis and phlebitis with necrosis of the jugular region; degenerative changes liver and kidneys; lymphoid follicles prominent spleen with slight tumor splenis; foreign bodies abomasum and caecum	No changes in brain sections; slight fatty changes and slight proliferative changes on the periphery of the liver; prescapular lymph gland shows haemorrhage; slight acute splenitis.
32729	16723	5638	Vacc. Imm.; A. cent.; E. ovis; Theileriasis Expt.; splenectomized	Tz. Virus ovine	Killed in <i>extremis</i>	Slight swelling lymph glands; subendocardial haemorrhages; ecchymoses intima pulmonary vein; oedema subcutaneous tissue; anaemia; excellent condition	Liver: No fatty changes; in places there are small clusters of neutrophils although rare, and here and there an increase of lymphocytes in the periphery; medulla, cerebellum, cerebrum, corpus quad., thalamus, myocard and lungs—nothing unusual
42359	16254	5611	Blue tongue susceptible	Tz. virus ovine	Killed for collection of material; no symptoms	No post-mortem made.....	Cerebrum, cerebellum, hippocampus, Thalamus, corpora quad., i.e. various parts of brain, besides liver, myocard, kidneys, lymph glands and lungs, no specific changes seen.
42436	16299	5611	Blue tongue susceptible	Tz. virus ovine	Killed in <i>extremis</i> 3 weeks after injection; sequel blue-tongue	Slight general anaemia; cachexia; general atrophy N.B.—No evidence found for the extreme emaciation	In cerebellum, cerebrum, pons, medulla, thalamus and corpora quad.; no changes of an infiltrative nature seen; neither any vacuolation of ganglion cells; some of ganglion cells, however, are stained slightly darker; slight fatty changes around central vein of liver; no specific changes seen in kidney; spleen and myocard; spleen in the red pulpa shows fairly well-marked haemosiderosis.
45005	16848	5773	Blue tongue susceptible	Tz. virus ovine	Blue tongue	Marked oedema of subcutis in the intra-mandibular space; marked swelling, oedema and hyperaemia of lymph glands; swelling and hyperaemia of lips and tongue; hyperaemia, swelling and degeneration of liver and kidneys; hyperaemia and degeneration of myocard; oedema and hyperaemia lungs; hyperaemia bronchi and trachea; blood coagula abomasum	Liver shows slight fatty changes round central vein; slight hyperaemia and slight proliferative changes in periphery of liver lobule; slight hyperaemia in kidney and lymph gland; well-marked oedema and hyperaemia lungs; no specific changes in myocard.

PATHOLOGY (continued).

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
44974	16997	5774	Blue tongue susceptible	Tz. virus ovine	Killed in <i>extremis</i> 3 weeks after inoculation; sequel blue tongue	Slight tumor splenis; slight swelling of the liver; subepicardial and subendocardial haemorrhages; slight hydropericard; debility and cachexia	Slight fatty changes round central vein of liver with slight proliferative changes in periphery of lobule as well as localised accumulations of neutrophils here and there in the liver lobules; slight hyperaemia in the medulla and fatty changes cortex of the kidney. No material collected.
44991	—	5774	Blue tongue susceptible	Tz. virus ovine	Blue tongue	Post-mortem changes; few sub-endocardial petechiae; slight tumor splenis; hyperaemia and oedema lungs	Examination of blood, spleen, kidney, liver, and prescapular gland smears, stained with May-Grunewald negative; slight fatty changes myocard; "ballooning" of epithelial cells, stratum spinosum tongue with a slight pink homogeneous material together with a localised infiltration of neutrophils into the epithelial layers and partial desquamation of the keratinised layers; fatty changes around central veins of liver; slight hyperaemia and haemosiderosis R.E. cells and very limited necrobiosis of a few liver cells (karyolyses) liver; extensive haemosiderosis spleen; haemosiderosis R.E. cells lymph glands; haemosiderosis and hyperaemia kidney.
44995	17066	5773	Blue tongue susceptible	Tz. virus ovine	Blue tongue	Oedema subcutis shoulder, throat and neck; well-defined hydroperocard; well-defined echymoses epicard and degenerative changes myocard; oedema and atrophy of lymphoid tissues of lymph glands; localised necrosis tongue; hyperaemia and oedema lungs; bolus of food oesophagus [compare paralysis of oesophagus H.S.]; degenerative parasitic cysts liver; gallbladder and intestines; local acute catarrhal enteritis; localised hyperaemia kidneys	Examination of prescapular lymph gland, spleen and liver smears stained with May-Grunewald show nothing specific; red count 12,000,000, White count 4,000 per c.mm.; slight fatty changes liver; haemosiderosis; R.E. cells lymph gland; haemorrhages into papillary bodies of tongue as well as into musculature in places; also localised accumulation of neutrophils associated with the papillary bodies; well-marked haemosiderosis spleen.
44993	17083	5773	Blue tongue susceptible	Tz. virus ovine	Killed in <i>extremis</i> ; blue tongue	Swelling buccal mucous membrane; multiple haemorrhages tongue and early necrosis; slight oedema and hyperaemia lungs; slight swelling of spleen; oedema of some of glands; degenerative changes liver	Examination of prescapular lymph gland, spleen and liver smears stained with May-Grunewald show nothing specific; red count 12,000,000, White count 4,000 per c.mm.; slight fatty changes liver; haemosiderosis; R.E. cells lymph gland; haemorrhages into papillary bodies of tongue as well as into musculature in places; also localised accumulation of neutrophils associated with the papillary bodies; well-marked haemosiderosis spleen.

PATHOLOGY (continued).

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
44994	17108	5773	Blue tongue susceptible	Tz. virus ovine	Blue tongue	Oedema subcutis, especially neck; slight general anaemia; slight tumor splenis; severe hyperaemia and oedema lungs; hydrothorax and hydropericard; slight hyperaemia liver and kidneys; hyperaemia areas lips and tongue; subepi- and endocardial petechiae; petechiae abomasum and small intestine	Smears from spleen, gland, lip and tongue stained with May-Grunewald; no specific changes; sections from pons, cerebellum, cerebrum, hippocampus, medulla and thalamus no specific changes; fatty changes around central veins and hyperaemia liver; haemosiderosis R.E. cells liver as well as slight bile stasis and slight cirrhosis in periphery; no specific changes kidney; hyperaemia lymph gland and fatty changes R.E. cells; hyperaemia and well-marked oedema lungs; very slight fatty changes myocard; extensive haemosiderosis spleen.
41722	17170	5816	Blue tongue susceptible	Tz. virus ovine	Killed. Acute symptoms blue tongue for collection of specimens	Oedema tongue and multiple small haemorrhages; slight oedema intramandibular region; oedema lungs; degeneration liver, kidneys and myocard; slight swelling and oedema of some lymph glands; hyperaemia choroid plexus	No specific changes seen in cerebellum and cerebrum; localised accumulation of neutrophiles extending into epithelial layers of the tongue; also into papillary bodies, in places associated with haemorrhage with loss of the keratinised epithelium over these foci; slight fatty changes, especially around central veins of liver and proliferation of stroma in the periphery; an increase of neutrophiles in the intralobular blood vessels of liver lobule; no specific changes seen in spleen and lymph glands. Careful studies made with specially prepared sections stained with Giemsa for inclusion bodies proved to be negative.
41762	—	5816	Blue tongue susceptible	Tz. virus ovine	Killed in extremis; sequel blue tongue	Slight emaciation; severe general anaemia; extensive lesions of myiasis rump; few subendo-cardial haemorrhages left ventricle	No material collected.

PATHOLOGY (continued).

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
45343	17197	5773	Blue tongue susceptible	Tz. virus ovine	Blue tongue with multiple pneumonic foci and necrosis	Hydrothorax; slight hydropericard; extensive oedema lungs; numerous isolated necrotic foci lungs; degeneration liver, kidney and myocard; tumor splenis; petechiae epicard; oedema perocard; slight acute muco-catarthral enteritis of small intestine; adult oesophagotones in large intestine	Localised pneumonic foci which have undergone complete necrosis; some foci, however, show acini filled with fibrin, neurophiles as well as desquamated endothelial cells without evidence of necrosis; no evidence of bacterial infection; proliferative changes connective tissue and bile duct epithelium in liver and slight fatty changes; slight evidence of necrosis in the tubuli medulla of kidney; fatty changes myocard. Localised pneumonic foci with necrosis; fatty changes round central vein liver; no specific changes lymph gland and myocard.
45337	17229	5773	Blue tongue susceptible	Tz. virus ovine	Blue tongue with multiple pneumonic foci and necrosis	Post-mortem changes; well-marked swelling and oedema lips, lymph glands and tongue; extensive hyperaemia and oedema lungs; petechiae and extravasations lips, tongue, epi- and endocard; degeneration liver, kidney, myocard; nodule lung; slight acute haemorrhagic enteritis; hyperaemia; oedema subcutis	Localised pneumonic foci with necrosis; fatty changes round central vein liver; no specific changes lymph gland and myocard.
45341	17253	5805	Blue tongue susceptible	Tz. virus ovine	Blue tongue	Oedema subcutis, lips, tongue, throat; multiple haemorrhages lips and tongue; well-marked oedema lungs; hydrothorax; hydropericard; extravasations epicard and both endocards; slight hyperaemia and degenerative changes myocard, liver and kidneys; very slight acute jejunitis; enlargement and oedema of a number of lymph glands	Slight interstitial hepatitis and slight fatty changes liver; no specific lesions myocard, kidneys and adrenals; slight hyperaemia lungs and kidneys; thalamus, hippocampus, cerebellum, cerebrum, medulla and pons except for distention of blood vessels; no specific changes seen of an infiltrative or degenerative character.
45371	—	5773	Blue tongue susceptible	Tz. virus ovine	Sequel Gang. myositis and pseudo-membranous pleuritis L. side assoc. with injury	Decomposition fairly advanced; localised gangrenous myositis; localised gangrenous pseudo-membranous pleuritis; hyperaemia lungs and kidneys; degeneration myocard and liver complicated with post-mortem changes; slight acute localised enteritis; slight oedema tongue and buccal mucosa	No material collected.

## PATHOLOGY (continued).

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
45007	17272	5773	Blue tongue susceptible	Tz, virus ovine	Blue tongue with multiple necrosis lungs	Slight ascites; purulent serofibrinous pleuritis; marked oedema and hyperaemia lungs; multiple necrotic foci lungs; slight tumor splenis and haemorrhage into capsule of spleen; marked degeneration and haemorrhages liver; degeneration kidneys and heart; hyperaemia, swelling and oedema of some lymph glands	Blood leucopenia and clasmato-cytes, vacuolated with dark granules not infrequent; smears from lung numerous short, stump-like bacteria; smears from spleen nothing unusual; slight proliferative changes periphery of liver lobule and well-defined haemangiomata; various stages of pneumonic foci from congestion to serious catarrhal exudate in parts associated with localised necrosis; hyperaemia in patches in medulla of kidney and slight fatty changes of the epithelium of some of the tubules; hyperaemia and fatty changes R.E. cells, prescapular lymph gland; no specific changes myocard and spleen.
44972	17302	5773	Blue tongue susceptible	Tz, virus ovine	Killed in extremis; sequel blue tongue	General anaemia; oedema subcutis region trachea, shoulder and thoracic cavity; pigmentation spleen and swelling of follicles; degeneration liver, kidney and myocard; slight swelling tongue; no haemorrhages	Liver: Well-marked hyperaemia in periphery and central vein, increase of collagen fibres in the periphery with slight lymphocytic infiltration; pigment cells in periphery of liver not infrequent, similar to those described in Enz. Icterus, especially evident in Sudan III section; no fatty changes in liver; no abnormal haemosiderosis. Spleen: The lymphoid tissue very prominent; lymph gland shows extensive hyperaemia, in places a few clusters of pigment cells present in lymphoid tissue; hippocampus no infiltration seen; no regressive changes in cells; medulla, ditto; thalamus, ditto; corpus striatum nothing unusual; lung slight hyperaemia; second lymph gland shows a small cluster of pigment cells; very slight haemosiderosis in some of R.E. cells.

PATHOLOGY (continued).

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
44985	17301	5838-5805	Tz. virus bovine, but blue tongue susceptible	Tz. virus ovine	Killed in <i>extremis</i> ; sequel blue tongue	General anaemia; localised abscess in jugular vein, site of inoculation; slight enlargement of some lymph glands without hyperaemia; oedema subcutis, shoulder and thoracic cavity; pigmentation spleen and swelling of follicles; degeneration liver, myocard and kidneys; slight swelling tongue	Liver: Increase of collagen fibres with slight proliferation of bile duct epithelium and fibrocytes and infiltration with lymphocytes; these cellular elements are rather prominent and frequent around central veins with fatty changes; kidney in medulla here and there evidence of calcification; no abnormal pigmentation; one lymph gland—well-marked hyperaemia. Spleen: Extensive haemosiderosis, white pulpa prominent.
45008	17160	5812	Blue tongue susceptible	Blue tongue virus Novo	Blue tongue (Novo strain)	Post-mortem changes advanced. Well-marked oedema of subcutis, neck, shoulder, thigh; hydrothorax; hydropericard; slight hyperaemia both lungs; extravasations epicard; degeneration liver and myocard; oedema of tongue and localised haemorrhage with necrosis; haemorrhages and hyperaemia rumen and abomasum; localised haemorrhagic jejunitis (acute)	In one area of a section from tongue there is a well-marked haemorrhage into musculature. With Giemsa stain no evidence of inclusion bodies.
44984	17297	5657	Blue tongue susceptible	Blue tongue virus ovine	Blue tongue (Novo strain)	Oedema subcutis, neck and side of thorax; multiple haemorrhages tongue; extravasations epicard and endocard, marked left side; degeneration myocard and liver; slight tumor splenis; degeneration and hyperaemia kidneys; hyperaemia lungs (probably heart failure); hyperaemia nasal cavities; hyperaemia (patches) rumen and oesophageal groove; multiple hyperaemia jejunum; hyperaemia large intestine	Slight fatty changes round central vein and very slight proliferation in periphery of the liver lobules; no specific changes kidneys and spleen; well-marked oedema and hyperaemia lungs; multiple haemorrhages myocard; hermosiderosis lymph gland, associated with fatty changes in R.E. cells; several well-defined haemorrhages into the epithelial layers of the tongue; no specific changes seen in cerebrum, cerebellum, hippocampus, thalamus, and corpus striatum.

PATHOLOGY (continued).

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
45415	17357	5845	Blue tongue susceptible	Tz, virus ovine	Blue tongue, compl. haemonchosis	Slight cachexia; well-marked dilatation of right ventricle; hydropericard; well-marked oedema and hyperaemia lungs; localised atelectasis lungs and cardiac lobes; degeneration myocard, liver, and kidneys; slight acute catarrhal enteritis; well-marked haemonchosis and slight oesophagostomiasis	Liver: No specific changes. Lungs: Oedema and hyperaemia.
45369	—	S. 5805	Blue tongue susceptible	Tz, virus ovine	Blue tongue	Hyperaemia lungs and liver; slight degeneration liver and myocard; subendocardial haemorrhages; ulcers in abomasum	No specimens collected.
45420	—	S. 5855	Blue tongue susceptible	Tz, virus ovine	Blue tongue	Slight post-mortem changes; hyperaemia and localised oedema subcutis; marked hydrothorax and hydropericard; extensive oedema and hyperaemia lungs (c.f. dunkop H.S.); extravasations epi- and endocard (c.f. dikkop); degeneration liver and kidneys; swelling spleen, tongue and localised haemorrhage; slight oedema and multiple petechiae abomasum; slight localised acute catarrhal enteritis	Brain: Various levels no infiltration and ganglion cells stain well, some parts show blood vessels distended. Liver: Hyperaemia, no proliferation changes, but fatty changes around central veins. Tongue: haemorrhages in musculature and in propria. Spleen and lymph gland: No specific changes.
45445	—	S. 5855	Blue tongue susceptible	Tz, virus ovine	Blue tongue	Slight post-mortem changes; petechiae epicard and abomasum; ecchymoses left endocard; marked hyperaemia and moderate oedema lungs; few haemorrhages tongue and slightly swollen; soight degeneration of liver	No specimen.
45741	17487	S. 5880	Blue tongue susceptible	Tz, virus ovine	Blue tongue	Well-marked hydropericard; fairly extensive extravasations epicard and endocard hyperaemia and oedema lungs; atelectasis left lung; degenerative changes liver and kidneys; no lesions lips or tongue	Liver: Slight hyperaemia and slight fatty changes. Lung: Slight hyperaemia; slight localised catarrhal pneumonia in the atelectatic area. Spleen: Lymphoid tissue appears increased at expense of red pulpa. Myocard: Nothing unusual except here and there fine fat droplets.



PATHOLOGY (continued).

D.O.B. No.	Specimen No.	Experiment No.	Susceptible or Immune.	Virus Tested with.	Diagnosis.	Macroscopical Lesions.	Microscopical Lesions.
45727	17504	S. 5880	Blue tongue susceptible	Tz. virus ovine	Killed in <i>extremis</i> ; sequel blue tongue	Very slight localised oedema subcutis; degenerative changes liver and kidneys; very slight swelling spleen and tongue; slight swelling and oedema of some of the lymph glands	Gall bladder: Multiple necrosis and fibrosis. Kidneys: No specific changes. Liver: Except for slight fatty changes; no specific changes. Lymph gland and spleen: Diffuse localised calcification with granular tissue kidney.
45734	17505	S. 5880	Blue tongue susceptible	Tz. virus ovine	Killed in <i>extremis</i> ; sequel blue tongue	Well-marked oedema of subcutis ventral aspect of neck, shoulders, back; slight degenerative changes kidneys and liver; lymphoid hyperplasia spleen	Spleen: Red pulpa prominent, white pulpa not prominently present; extensive haemosiderosis.
45731	17506	S. 5880	Blue tongue susceptible	Tz. virus ovine	Killed in <i>extremis</i> ; sequel blue tongue	Extensive oedema along back, neck, shoulders, front of thighs resembling a marked case of dikkop H.S.; slight swelling and oedema of lymph glands; slight degenerative changes, liver and kidneys; degenerated panastia cyst attached to liver	Liver and brain: No changes.
45745	17592	S. 5903	Blue tongue susceptible	Tz. virus ovine	Blue tongue	Generalised cyanosis and petechiae and ecchymoses of all serous membranes; severe swelling of tongue and lips with ulcers on inside of lower lip; extensive extravasations mucous membrane abomasum, extending partially into mucous membrane of duodenum; extravasation mucous membrane oesophagus; slight oedema glottis; pulmonary oedema and hyperaemia; extravasations subpericard and subendocard; slight degeneration myocard; venous stasis liver and degenerative changes; tumor splenis, red pulpa prominent; lymph glands generally enlarged and reddened	Liver: Hyperaemia and slight proliferation in the periphery. Kidney: Here and there slight calcification. Lymph glands: Hyperaemia; lymphoid tissue prominent. Spleen: A great deal of blood in the red pulpa.