

TABLE 10. PROTOCOL OF EXPERIMENT 1. INJECTION INTO A DOG OF THREE NORMAL HYDROPHOBIC ANIMAL FATTOWED BY A 4 PER CENT. SOLUTION OF SODIUM BICARBONATE.\*

MALE; WEIGHT, 8.6 KG.

| Time  | Total Amount Injected (cc.) |     | pH   |      | N    |      | HCl (cc.) |      | N    |      | NaOH (cc.) |      | Alveolar $\text{CO}_2$ Tension, mm. Hg |    | Remarks                                                                                                                                |
|-------|-----------------------------|-----|------|------|------|------|-----------|------|------|------|------------|------|----------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------|
|       | N                           | HCl | N    | HCl  | N    | HCl  | N         | HCl  | N    | HCl  | N          | NaOH |                                        |    |                                                                                                                                        |
| 12:10 | ..                          | ..  | 7.55 | 7.55 | 7.45 | 7.45 | 7.55      | 7.55 | 7.55 | 7.55 | 7.55       | 7.55 | 38.6                                   | .. | Dog on table; respirations, 8 per min.; pulse, 31 to 34. Injection of HCl begun.                                                       |
| 12:25 | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | ..                                                                                                                                     |
| 12:40 | 75                          | ..  | 7.35 | 7.35 | 7.35 | 7.35 | 7.35      | 7.35 | 7.35 | 7.35 | 7.35       | 7.35 | 51.9                                   | .. | Breathing is slow and deep; salivating profusely; muscles relaxed; defecating involuntarily, seems much distressed; injection stopped. |
| 12:46 | 50                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | ..                                                                                                                                     |
| 12:50 | ..                          | ..  | 7.15 | 7.15 | 7.1  | 7.1  | 7.15      | 7.15 | 7.15 | 7.15 | 7.2        | 7.2  | ..                                     | .. | Marked "an hunger", involuntary defecation continues.                                                                                  |
| 12:58 | 135                         | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | 35.1                                   | .. | Respirations, 16 per min., deep and irregular; pulse, 22 to 34.                                                                        |
| 1:05  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | The injection of the last 19 cc. of acid immediately caused deepening and quickening of respiration.                                   |
| 1:07  | 165                         | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | Injection of NaHCO <sub>3</sub> begun.                                                                                                 |
| 1:08  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | Respirations decidedly shallower; animal still relaxed and quiet.                                                                      |
| 1:14  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | ..                                                                                                                                     |
| 1:20  | ..                          | ..  | 7.35 | 7.35 | 7.3  | 7.3  | 7.4       | 7.4  | 7.4  | 7.4  | 7.45       | 7.45 | 36.5                                   | .. | ..                                                                                                                                     |
| 1:25  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | ..                                                                                                                                     |
| 1:35  | ..                          | ..  | 7.6  | 7.6  | 7.5  | 7.5  | 7.6       | 7.6  | 7.6  | 7.6  | 7.6        | 7.6  | 43.8                                   | .. | Animal more animated; struggling.                                                                                                      |
| 1:40  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | Free diuresis; pH of urine, 7.65.                                                                                                      |
| 1:50  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | Injection stopped.                                                                                                                     |
| 1:59  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | ..                                                                                                                                     |
| 2:05  | ..                          | ..  | 7.7  | 7.7  | 7.6  | 7.6  | 7.7       | 7.7  | 7.7  | 7.7  | 7.8        | 7.8  | 48.0                                   | .. | Animal seems weak; breathing quietly; satisfied.                                                                                       |
| 2:10  | ..                          | ..  | ..   | ..   | ..   | ..   | ..        | ..   | ..   | ..   | ..         | ..   | ..                                     | .. | ..                                                                                                                                     |

\* Injections made into leg vein; blood for examination withdrawn from jugular; N = HCl made up in 0.5 per cent. salt solution; bicarbonate solution made up in distilled water. Arrows mark beginning and end of injections.