CLAIMS:

1. A method for production of a botulinum toxin, comprising the steps of:

(a) providing a working cell bank (WCB) comprising a *Clostridum botulinum* bacterium;

(b) adding the working cell bank to a first container containing a vegetable toxin production medium (VTPM), and culturing the *Clostridium botulinum* bacterium in the VTPM under conditions which permit growth of the *Clostridium botulinum* to produce a pre-culture;

(c) adding the pre-culture to a second container containing VTPM, and culturing the *Clostridium botulinum* bacterium under conditions that allow production of a botulinum toxin; and

(d) recovering the botulinum toxin;

wherein the VTPM is substantially free or free of an animal derived product and comprises wheat peptone at a concentration of 15-30 g/l.

2. The method of claim 1, wherein step (c) comprises culturing the *Clostridium botulinum* bacterium at a temperature of: 33±1ºC; 33±0.5ºC; or 33±0.2ºC.

3. The method of claim 1 or claim 2, wherein step (c) is conducted for 69±2 hours.

4. The method of any one of claims 1-3, wherein the botulinum toxin is botulinum neurotoxin type A (BoNT/A).

5. The method of any one of claims 1-4, wherein the container used in the steps (b) and (c) is a fermentation bag.

6. The method of any one of claims 1-5, wherein the conditions in steps (b) and (c) comprise an anaerobic environment.

7. The method of claim 6, wherein the anaerobic environment has a dissolved oxygen (DO) concentration of < 2%.

8. The method of any one of claims 1-7, wherein the condition in step (b) comprises a temperature of between 35 ℃ and 39 ℃, or 37±1ºC.

9. The method of any one of claims 1-8, wherein the condition in step (c) comprises a temperature of between 30 ℃ and 37 ℃, or 33±1ºC.

10. The method of any one of claims 1-9, wherein the volume ratio of the WCB to the VTPM in step (b) is no greater than 2.0%, or is 0.08%.

11. The method of any one of claims 1-10, wherein the volume ratio of the pre-culture to the VTPM in step (c) is between 1:2 and 1:50, or is 1:9.

12. The method of any one of claims 1-11, wherein the step (b) is conducted until OD_{600} reaches the range of 0.1 to 1.0 (± 5%), or is 0.2 to 0.4 (± 5%).

13. The method of any one of claims 1-12, wherein the step (b) is conducted for between 10 and 30 hours, or for 19 hours.

14. The method of any one of claims 1-2 or 4-13, wherein the step (c) is conducted for between 60 and 80 hours, or for 69±2 hours.

15. The method of any one of claims 1-14, wherein microbiological purity for other microorganisms than *C. botulinum* is tested in the pre-culture after step (b) and before step (c).

16. The method of any one of claims 1-15, wherein microbiological purity for other microorganisms than *C. botulinum* is tested in the culture after step (c) and before step (d).

17. The method of any one of claims 1-16, wherein the wheat peptone concentration in the VTPM is between 15 g/L and 25 g/L (± 5%), or is 20 g/L (±5%).

18. The method of any one of claims 1-17, wherein the VTPM comprises wheat peptone, yeast extract, D-(+)-Glucose, L-Cysteine hydrochloride monohydrate, and Medical antifoam C emulsion.

19. The method of any one of claims 1-18, wherein the VTPM comprises:

between 15 g/L and 25 g/L (± 5%) of wheat peptone;
between 5 g/L and 50 g/L (± 5%) of yeast extract;
between 0.05 g/L and 20 g/L (± 5%) of D-(+)-glucose;
between 0.05 g/L and 0.50 g/L (± 5%) of L-cysteine hydrochloride monohydrate; and
between 0.05 g/L and 0.50 g/L (± 5%) of medical antifoam c emulsion.

20. The method of claim 19, wherein the VTPM comprises:

20 g/L (± 5%) of wheat peptone;
20 g/L (± 5%)of yeast extract;
5 g/L (± 5%) of D-(+)-glucose;
0.20 g/L (± 5%) of L-cysteine hydrochloride monohydrate; and
0.24 g/L (± 5%) of medical antifoam c emulsion.

21. The method of any one of claims 1-20, wherein the pH of the VPTM is between 6.7 and 7.2 (± 5%).

22. A composition comprising a *Clostridium botulinum* and a culture medium for producing a botulinum toxin, wherein the medium is free or substantially free of an animal derived product, and comprises wheat peptone at a concentration of 15-30 g/l (± 5%), yeast extract, D-(+)-Glucose, L-Cysteine hydrochloride monohydrate, and Medical antifoam C emulsion.

23. The composition of claim 22, wherein the culture medium comprises:

between 15 g/L and 25 g/L (± 5%) of wheat peptone;

between 5 g/L and 50 g/L (± 5%) of yeast extract;

between 1 g/L and 20 g/L (± 5%) of D-(+)-glucose;

between 0.05 g/L and 0.50 g/L (± 5%) of L-cysteine hydrochloride monohydrate; and

between 0.05 g/L and 0.50 g/L (± 5%) of medical antifoam c emulsion.

24. The composition of claim 23, wherein the culture medium comprises:

20 g/L (± 5%) of wheat peptone;

20 g/L (± 5%) of yeast extract;

5 g/L (± 5%) of D-(+)-glucose;

0.20 g/L (± 5%) of L-cysteine hydrochloride monohydrate; and

0.50 g/L (± 5%) of medical antifoam c emulsion.