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CHAPTER 32. No. 10.

BREWERY.

Ordinance
Ch. 32. No. 10
-1940.AN ORDINANCE TO REGULATE THE BREWING OF BEER AND
TO IMPOSE CERTAIN DUTIES THEREON.Commence-
ment.

[9th August, 1899.]

Short title.

1. This Ordinance may be cited as the Brewery Ordinance.

Interpre-
tation.

2. In this Ordinance—

“ approved ” and “ required ” mean approved and required by the Comptroller;

“ beer ” includes ale, porter, spruce beer, and black beer, and any other description of beer, and any liquor which is made or sold as a description of beer or as a substitute for beer, and which on analysis of a sample thereof at any time shall be found to contain more than two per centum of proof spirit, or to have an original gravity exceeding one thousand and twelve degrees: Provided that the Governor shall have power to modify this definition or permit such exemptions as may be found desirable;

“ brewer ” means a brewer of beer for sale, that is to say, any person who brews beer for the use of any other person at any place other than the premises of the person for whose use the beer shall be brewed, and any person licensed to deal in or retail beer, who brews beer;

“ Comptroller ” means the Comptroller of Customs and Excise;

“ Officer ” means the Comptroller or any Supervisor or any Officer of the Customs and Excise department for the time being employed or acting as such;

“ prepared grist ” means rice, and any other description of corn which may have been subjected to any special process, other than malting, for use in brewing;

“ sugar ” means any saccharine substance, extract, or syrup, and includes any material capable of being used in brewing, except malt or corn;

“ wort ” means any extract or solution convertible into beer.

3. (1) There shall be paid to the Comptroller for the use of the Colony a duty of \$4.80 on a licence to be taken out annually by a brewer in the Colony. Licence to brew.

(2) Every such licence shall be in such form as the Comptroller shall direct, and shall, whenever issued, be granted only on payment of the duty in full, and shall expire on the 31st of December in each year.

(3) Such licence shall not authorise the brewer to sell beer other than that brewed by himself, and the quantity to be sold at any one time shall not be less than one gallon or twelve reputed pint bottles.

(4) If any person shall brew beer for sale without having in force a proper licence under this Ordinance, he shall be liable to a fine of four hundred and eighty dollars, and all wort, beer, vessels, utensils, and materials for brewing shall be forfeited.

(5) If any brewer shall sell any quantity of beer less than one gallon or twelve reputed pint bottles, he shall be deemed to be a retailer and shall be liable to the penalty for retailing beer without a licence.

4. There shall be charged, collected, levied, and paid for the use of the Colony, in respect of beer brewed in the Colony, a duty calculated according to the specific gravity of the wort thereof; that is to say:— Excise duty on beer.

Upon every gallon of wort of a specific gravity of one thousand and fifty degrees, the duty of seventeen cents, and so in proportion for any difference in quantity or gravity.

5. Forty-two pounds weight of malt or corn of any description, or thirty-two pounds weight of prepared grist, Bushel of malt—
definition of.

or twenty-eight pounds weight of sugar, shall be deemed the equivalent of a bushel of malt; and the expression "bushel of malt" shall include its equivalents or any such quantities of malt, corn, prepared grist, and sugar or any two or more of these materials, as by relation to such equivalents shall be equal to a bushel of malt.

Charge of duty.

6. (1) Every brewer shall be deemed to have brewed eighteen gallons of wort of the gravity of one thousand and fifty degrees for every bushel of malt entered or used by him in brewing.

(2) The duty on beer brewed by a brewer shall be charged in respect of every gallon of wort produced of the gravity or original gravity of one thousand and fifty degrees, and so in proportion for any difference in quantity or gravity as entered in the book by the brewer, or as ascertained by the Officer, whichever is higher.

(3) If the amount of wort deemed to have been brewed by relation to materials exceeds in quantity and gravity the wort produced from such materials, the duty shall be charged upon the deemed produce.

Governor may authorise deduction of certain materials by way of relief.

7. Where the materials used in brewing by a brewer are proved to the satisfaction of the Governor to be of such a description or nature that some deduction from the quantity chargeable by relation to materials should be made, he shall authorise such a deduction from that quantity as shall, in his opinion, afford just relief to the brewer.

Mode of ascertaining gravity and quantity.

8. (1) An approved saccharometer and tables shall be used to ascertain the quantity by relation to gravity of all wort; and, in calculating the gravity, a degree of gravity shall be taken as equal to one-thousandth part of the gravity of distilled water at sixty degrees Fahrenheit.

(2) The quantity and gravity so ascertained shall be deemed to be the true quantity and gravity of such wort.

Mode of ascertaining original gravity.

9. When the original gravity cannot be satisfactorily ascertained by the saccharometer, such gravity may be determined in the following manner—

(a) a sample shall be taken from any part of such

wort, and a definite quantity thereof by measure at the temperature of sixty or eighty degrees Fahrenheit shall be distilled;

(b) the distillate and residue shall each be made up with distilled water to the original volume and temperature before distillation, and the gravity of each shall be ascertained;

(c) the number of degrees by which the gravity of the distillate is less than the gravity of distilled water shall be deemed the spirit indication of the distillate;

(d) the degrees of original gravity standing opposite to such spirit indication in the Table in the Schedule hereto, added to the specific gravity of the residue, shall be deemed to be the original gravity of the wort; Schedule.

(e) the original gravity so found shall be taken to be the original gravity of the wort for charging the duty thereon whenever it exceeds the gravity entered by the brewer or ascertained by the saccharometer.

10. The duty on beer shall become due immediately on the same being charged by the Officer, but the Comptroller may cause the charge to be made up at the close of each month in respect of all the brewings during that month, and, in that case, the aggregate of the amounts of wort deemed to be brewed by relation to materials, and the aggregate of the amounts of wort produced, shall be treated as wort deemed to be brewed or produced in one brewing, and the Comptroller may, if he thinks fit, defer the payment of the duty upon such terms as may be approved: Provided that the time for payment shall not be later than the fifteenth day of the third month succeeding the month in which the duty was charged. Payment of duty.

11. When any materials upon which a charge of duty has been made, or any wort or beer, shall be destroyed by accidental fire or other unavoidable cause while the same are on the entered premises of a brewer, the Governor shall, on proof of such loss to his satisfaction, order that the duty charged or paid be remitted or repaid as the case may be. Loss by fire or other unavoidable cause.

Brewing
book.

12. (1) A book in the approved form shall be delivered by an Officer to every brewer, and the following provisions shall have effect in relation to the book, and to the entries to be made therein—

(a) the brewer shall keep the book in some part of his entered premises at all times ready for the inspection of the Officer, and shall permit any Officer at any time to inspect the same and make extracts therefrom;

(b) the brewer shall enter separately in the book the quantity of the several materials which he intends to use in his next brewing, and also the day and hour when such next brewing is intended to take place;

(c) the brewer shall make such entry, so far as respects the day and hour of brewing, twenty-four hours at the least before he shall begin to mash or dissolve, and, so far as respects the quantity, two hours at the least before the hour entered for the mashing and the dissolving respectively;

(d) the brewer shall, two hours at the least before the hour entered for brewing, enter the time when all the wort will be drawn off the grains in the mash tun;

(e) the brewer shall, within one hour of the wort being collected, or, if the wort be not collected before six in the afternoon, before six in the forenoon of the following day, enter the particulars of the quantity and gravity of the wort produced from each brewing, and also the description and number of the vessel or vessels into which the wort have been conveyed;

(f) when fermentation shall have commenced in any wort before the brewer shall have entered the quantity and gravity thereof in the book provided for that purpose, the true original gravity of such wort before fermentation shall be entered by the brewer;

(g) the brewer shall, at the time of making any entry, insert the date when the entry is made;

(h) the brewer shall not cancel, obliterate, or alter any entry in the book, or make therein any entry which is untrue in any particular;

(i) the brewer shall, if so required by the Comptroller, send notice in writing containing the required par-

particulars to the proper Officer forty-eight hours before his next brewing is intended to take place.

(2) For any contravention of this section the brewer shall be liable to a fine of four hundred and eighty dollars.

13. (1) Every brewer shall cause to be legibly painted with oil colour, and keep so painted, on some conspicuous part of every mash tun, underback, wort receiver, copper, heating tank, cooler, and collecting and fermenting vessel intended to be used by him in his business, and on the outside of the door of every room and place wherein any part of his business is to be carried on, the name or initial letter or letters of the name of the vessel, room, or place, according to the purpose for which it is intended.

Marking of vessels and rooms and positions of vessels.

(2) When more than one vessel, room, or place is used for the same purpose, all such vessels, rooms, or places shall be marked by progressive numbers.

(3) All mash tuns, underbacks, wort receivers, coppers, heating tanks, coolers, and collecting and fermenting vessels, shall be so placed and fixed as to admit of the contents being accurately ascertained by gauge or measure and shall not be altered in shape, position, or capacity without two days' previous notice in writing to the proper Officer.

(4) For any contravention of this section the brewer shall be liable to a fine of four hundred and eighty dollars.

14. Every brewer shall, before he begins to brew, make entry in the required form of all premises, rooms, places, and vessels intended to be used by him for his business, specifying the purpose for which each room, place, and vessel is to be used, and the mark by which it is distinguished. The brewer shall sign the entry, and deliver it to the proper Officer.

Entry of premises.

15. (1) Every brewer who shall use any description of sugar, whether cane sugar, saccharum, glucose, or other saccharine substance, or extract, or syrup (hereinafter referred to as "sugar") in the brewing of beer shall, before he begins to store or use the same, make entry of a room on

Sugar store and accounts of sugar.

his premises (hereinafter called a sugar store) for the purpose of storing the same.

(2) The brewer shall not receive any sugar unless the same is accompanied by an invoice from the seller thereof showing the marks on each package and the particulars of the description and weight or quantity of the contents.

(3) All sugar received shall be immediately deposited in the sugar store, and shall not be removed therefrom except for the purpose of being used in brewing in accordance with an entry in the brewing book.

(4) Accounts may be taken, as the Comptroller may direct, of every description of sugar received by a brewer, and the brewer is hereby required to deliver to the proper Officer the particulars of all sugar of each and every description in his possession and every invoice relating thereto, and such brewer shall thereafter deliver to the Officer all invoices relating to sugar of every description subsequently received.

(5) The Officer shall keep an account of sugar of each and every description received by the brewer, and shall debit the brewer with the quantities specified in the invoices produced to him, and credit the brewer with the quantities entered in the brewing book as having been used in brewing.

(6) If, on taking account of the stock at any time, the quantity of any description of sugar in the possession of the brewer exceeds the quantity of that description which ought, according to the account kept by the Officer, to be in his possession, the excess shall be forfeited; and if the quantity be less than the quantity which ought, according to the account kept by the Officer, to be in his possession, any deficiency above two per centum on the total on the debit side of the account shall be deemed to have been used in the brewing of beer without due entry in the brewing book, and duty shall be charged in respect thereof as if the deficiency had been so used.

(7) If any brewer shall have any sugar in his possession elsewhere than in the sugar store or the mash tun or other vessel entered for dissolving sugar, or in due course or removal thereto, or shall refuse to produce invoices when so required, or use any device to prevent the Officer taking a true account of all sugar in his possession, he shall be liable

to a fine of two hundred and forty dollars, and the sugar found elsewhere than aforesaid shall be liable to seizure.

16. (1) A brewer shall not adulterate beer, or add any matter or thing thereto (except finings for the purpose of clarification, or other matter or thing sanctioned by the Governor) before the same is delivered for consumption, and any beer found to be adulterated or mixed with any other matter or thing (except as aforesaid) in the possession of a brewer shall be forfeited, and the brewer shall be liable to a fine of two hundred and forty dollars.

Adulteration
of beer.

(2) A dealer in or retailer of beer shall not adulterate or dilute beer, or add any matter or thing thereto (except finings for the purpose of clarification), and any beer found to be adulterated or diluted or mixed with any other matter or thing (except finings) in the possession of a dealer in or retailer of beer shall be forfeited, and he shall be liable to a fine of two hundred and forty dollars.

17. (1) All grains in a mash tun must be kept untouched for the space of one hour after the time entered in the book as the time for the wort to be drawn off, or if not then drained one hour after being drained, unless the Officer has attended and taken an account of such grains.

Operations
in course of
brewing.

(2) All wort shall be removed successively, and in the customary order of brewing, to the underback, coppers, coolers, and collecting and fermenting vessels, and shall not be removed from the last-mentioned vessels until an account has been taken by the Officer, or until after the expiration of twenty-four hours from the time at which the wort is collected in such vessels.

(3) When wort shall have commenced running into a collecting or fermenting vessel, the whole of the produce of the brewing shall be collected within twelve hours.

(4) When wort of different gravities are collected together in any vessel for the charge account, the brewer shall mix such wort thoroughly together so that a correct average sample of the whole may be obtainable.

(5) For any contravention of this section the brewer shall be liable to a fine of two hundred and forty dollars.

Excess in gravity or quantity of wort.

18. If the original gravity of any wort contained in the collecting or fermenting vessels shall at any time be found to exceed by five degrees the gravity, or by five per centum the quantity, as entered in the book by the brewer, or as ascertained by the Officer, such wort shall be deemed to be the produce of a fresh brewing and be charged with duty accordingly.

Separation and mixing of brewings.

19. (1) Every brewer shall keep the total produce of a brewing separate from the produce of any other brewing for the space of twenty-four hours, unless an account of the first-mentioned produce shall have been sooner taken by the Officer.

(2) He shall not mix the produce of one brewing with that of any other brewing, except in his store vats or casks, unless he shall have given previous notice in writing to the proper Officer, and he shall specify in writing the quantity and gravity of the wort when mixed: Provided that a brewer having weak wort of a gravity not exceeding twenty-five degrees may, if he thinks fit, reserve the same for mixing with the produce of his next brewing, but in such case he shall keep all such weak wort in the coppers, heating-tanks, or other vessels entered for the purpose.

(3) For any contravention of this section the brewer shall be liable to a fine of four hundred and eighty dollars.

Officer may take samples.

20. (1) An Officer may take such samples as he may deem necessary of any wort or beer or materials for brewing in the possession of any brewer.

(2) The brewer may, if he wishes, before any such sample is taken, stir up and mix together all such wort, beer, or materials from which the sample is taken.

Payment for samples.

(3) Any Officer may at any time take samples of any goods or commodities chargeable with any duty of Excise or Customs: Provided that if the samples are taken after duty has been charged and paid on the goods or commodities, he shall pay for the same, if demanded, at the current wholesale price of the goods or commodities.

Penalty for concealing wort or beer or adding sugar thereto after duty charged.

21. If any brewer shall conceal any wort or beer so as to prevent any Officer from taking an account thereof, or shall

mix any sugar with any wort or beer so as to increase the quantity or gravity thereof after an account of such wort or beer has been taken by an Officer and the duty has been charged thereon, he shall, for every such offence, be liable to a fine of four hundred and eighty dollars, and the wort or beer in respect of which the offence is committed, together with the vessels containing the same, shall be forfeited.

22. (1) Every brewer shall provide and maintain sufficient and just scales and weights, and other necessary and reasonable appliances, to enable the Officers to take account of, or check by weight, gauge, or measure all materials and liquids used or intended to be used or produced in brewing.

Brewer to provide scales, weights, ladders, etc.

(2) He shall also render all necessary assistance to the Officers in the taking of such accounts.

(3) He shall also, if required by the Officer, provide sufficient lights, ladders, and other conveniences.

(4) For every contravention of this section the brewer shall be liable to a fine of four hundred and eighty dollars.

23. If any person exercising or carrying on a trade or business under or subject to any law of excise and required to keep scales or weights or measures—

Use of unjust weights or measures.

(a) in the weighing of his stock or any goods, uses or suffers to be used any false, unjust, or insufficient scales or weight or measure with intent to defraud His Majesty of any duty of excise, or

(b) before or after the weighing of his stock or any goods, puts or suffers to be put any other substance thereto, whereby any Officer may be hindered or prevented from taking a just and true account,

he shall, for every such offence, be liable to a fine of four hundred and eighty dollars, and the false, unjust, or insufficient scales, weights, and measures, shall be forfeited.

24. (1) An Officer may at any time, either by day or night, enter any part of the entered premises of a brewer to take an account of the materials used or to be used in brewing and of the wort and beer produced.

Power of entry and examination by Officers.

(2) If an Officer, after having demanded admission into the entered premises of a brewer and declared his name and business at any entrance or window thereof, is not immediately admitted, the Officer, and any person acting in his aid, may at any time, either by day or night (but at night only in the presence of a member of the Police Force), break open any door or window of the premises, or break through any wall thereof, for the purpose of obtaining admission, and the brewer shall be liable to a fine of four hundred and eighty dollars.

Power to enter and search for concealed pipes, etc.

25. (1) If any Officer has reason to suspect that any private or concealed pipe, or conveyance, or vessel, is kept or made use of by a brewer, he may, either by day or night (but at night only in the presence of a member of the Police Force), break open any part of the premises of such brewer and forcibly enter therein, and may break up the ground in or adjoining such premises, or any wall thereof, to search for such private or concealed pipe or conveyance or vessel.

(2) If such Officer shall find any such pipe or conveyance, he may enter in any house in the possession of any other person into which such pipe or conveyance may lead, and may break up any part of such house or premises, to search for the vessel communicating with such pipe.

(3) Every such pipe, conveyance, or vessel, and all beer, wort, or materials for brewing found therein shall be absolutely forfeited, and the brewer shall be liable to a fine of four hundred and eighty dollars.

(4) If any damage is done in the search, and such search is unsuccessful, the damage shall be made good.

Obstruction of Officers.

26. If any person by himself, or by any person in his employ, obstructs, hinders, or molests an Officer in the execution of his duty, or any person acting in the aid of such Officer, he shall be liable to a fine of four hundred and eighty dollars.

Drawback on beer exported.

27. There shall be allowed and paid in respect of beer brewed in the Colony which shall be exported from the Colony to foreign parts as merchandise, or shipped for use as ships' stores, a drawback calculated according to the

original gravity thereof equal to the amount of duty charged or paid on such beer.

28. (1) It shall be lawful for any person to export as merchandise to foreign parts, or for use as ships' stores, any beer brewed by a brewer in the Colony, upon giving notice in the required form to the proper Customs Officer.

Provisions
as to the
drawback.

(2) The beer shall be in such casks or packages as may be prescribed, and the exporter shall produce to the proper Officer at the place from which the beer is exported a declaration by the brewer made before an authorised Officer stating the date upon which the beer was brewed and the original gravity thereof, and that the full duties of excise have been charged thereon.

29. (1) An Officer may take a sample of beer from any cask or package produced for shipment on drawback, for the purpose of ascertaining in the manner authorised by this Ordinance the original gravity thereof.

Samples to
ascertain
gravity of
beer for
export.

(2) If the gravity so ascertained, or the quantity tested by gauge or measure, shall be less than the gravity or quantity stated in the declaration and notice delivered to the proper Officer, or, if such declaration or notice shall contain any untrue statement, no drawback shall be payable in respect of the beer therein referred to, and the brewer, and also the person intending to export the beer, shall be liable to a fine of two hundred and forty dollars.

30. (1) The Customs Officer at the port from which the beer is shipped shall endorse on the notice a certificate of the quantity of beer actually exported, and, at the expiration of one month from the date of such certificate, the proper Officer shall deliver to the exporter or his agent a debenture, in the prescribed form, specifying the amount of the drawback payable in respect of the beer.

Debenture
for payment
of drawback.

(2) The debenture shall be presented to the Comptroller, with a declaration endorsed thereon containing the prescribed particulars, signed by the exporter; and the Comptroller shall thereupon pay the exporter the amount specified in the debenture.

(3) Where a certificate of landing at the port of destination is required, such certificate shall be delivered to the Comptroller previously to the payment of the drawback.

Prohibition
against
possession
of sugar
and other
substances.

31. (1) A dealer in or retailer of beer shall not receive or have in his custody or possession any sugar, saccharine substance, extract, or syrup (except for domestic use, the proof whereof shall lie on him), or any preparation for increasing the gravity of beer.

(2) If a dealer in or retailer of beer receives or has in his custody or possession any article in contravention of this section, the article shall be forfeited, and he shall be liable to a fine of ninety-six dollars.

(3) This section shall not apply to sugar and other preparations deposited, in conformity with section 15, in the entered sugar store of a brewer, nor to sugar or syrup kept for sale in the ordinary course of trade, where upon the same premises the trade or business of a dealer in or retailer of beer is carried on.

Power to
prohibit use
of certain
substances
in excisable
goods.

32. (1) Whenever it shall appear to the satisfaction of the Governor that any substance or liquor is, or is capable of being, used in the manufacture or preparation for sale of any article subject to a duty of excise, and that such substance or liquor is of a noxious or detrimental nature, or, being a chemical or artificial extract or product, may affect prejudicially the interests of the revenue, it shall be lawful for the Governor, by notice published in the *Royal Gazette*, to prohibit the use of such substance or liquor in the manufacture or preparation for sale of any article specified in the notice, and by like notice to withdraw such prohibition at any time.

(2) If, after the publication of any such notice of prohibition in the *Royal Gazette*, any person shall use the substance or liquor thereby prohibited in the manufacture or preparation for sale of any article therein specified, he shall be liable to a fine of two hundred and forty dollars, and any such substance or liquor found in the possession of any person licensed for the manufacture or for the sale of the article, and also the article in the manufacture or

preparation whereof any such substance or liquor may have been used, shall be forfeited.

33. In respect of accidental loss and waste incident to the brewing of beer, and to the subsequent preparation thereof for consumption by bottling, a deduction of twelve per centum shall be made from the quantity of wort brought to charge, whether such quantity is charged by relation to the actual produce or to the materials used.

Allowance
for waste.

34. All materials imported by brewers for using in brewing and admitted as such by the Comptroller shall be free of all duty whatsoever thereon imposed by any law of the Colony: Provided that any brewer who shall dispose of any materials admitted free of duty otherwise than for brewing of beer shall be liable to a fine of four hundred and eighty dollars in addition to the amount of the duty payable on such materials.

Exemption
from
Customs
duty.

35. All offences under this Ordinance may be prosecuted, and all penalties incurred may be imposed or recovered, in the manner provided by the Summary Courts Ordinance.

Penalties.

36. In all rules, regulations, instructions and forms made or prescribed under this Ordinance, before the 1st of November, 1930, references to the Treasurer or to a Sub-Treasurer shall be read as references to the Comptroller.

References
in enact-
ments to
Treasurer
to be read
as references
to the
Comptroller.

(Section 9.)

SCHEDULE.

Table to be used in determining the Original Specific Gravity of Worts of Beer by the Distillation Process.

Degrees of Spirit Indication.	Degrees of original specific gravity.	Degrees of Spirit Indication.	Degrees of original specific gravity.	Degrees of Spirit Indication.	Degrees of original specific gravity.	Degrees of Spirit Indication.	Degrees of original specific gravity.
.0	.00	4.1	17.75	8.2	36.58	12.3	56.38
.1	.42	4.2	18.21	8.3	37.04	12.4	56.89
.2	.85	4.3	18.66	8.4	37.51	12.5	57.40
.3	1.27	4.4	19.12	8.5	37.97	12.6	57.91
.4	1.70	4.5	19.57	8.6	38.44	12.7	58.42
.5	2.12	4.6	20.03	8.7	38.90	12.8	58.93
.6	2.55	4.7	20.48	8.8	39.37	12.9	59.44
.7	2.97	4.8	20.94	8.9	39.83	13.0	59.95
.8	3.40	4.9	21.39	9.0	40.30	13.1	60.46
.9	3.82	5.0	21.85	9.1	40.77	13.2	60.97
1.0	4.25	5.1	22.30	9.2	41.24	13.3	61.48
1.1	4.67	5.2	22.76	9.3	41.71	13.4	61.99
1.2	5.10	5.3	23.21	9.4	42.18	13.5	62.51
1.3	5.52	5.4	23.67	9.5	42.65	13.6	63.01
1.4	5.95	5.5	24.12	9.6	43.12	13.7	63.52
1.5	6.37	5.6	24.58	9.7	43.59	13.8	64.03
1.6	6.80	5.7	25.03	9.8	44.06	13.9	64.54
1.7	7.22	5.8	25.49	9.9	44.53	14.0	65.10
1.8	7.65	5.9	25.94	10.0	45.00	14.1	65.62
1.9	8.07	6.0	26.40	10.1	45.48	14.2	66.14
2.0	8.50	6.1	26.86	10.2	45.97	14.3	66.66
2.1	8.94	6.2	27.32	10.3	46.45	14.4	67.18
2.2	9.38	6.3	27.78	10.4	46.94	14.5	67.70
2.3	9.82	6.4	28.24	10.5	47.42	14.6	68.22
2.4	10.26	6.5	28.70	10.6	47.91	14.7	68.74
2.5	10.70	6.6	29.16	10.7	48.39	14.8	69.26
2.6	11.14	6.7	29.62	10.8	48.88	14.9	69.78
2.7	11.58	6.8	30.08	10.9	49.36	15.0	70.30
2.8	12.02	6.9	30.54	11.0	49.85	15.1	70.83
2.9	12.46	7.0	31.00	11.1	50.35	15.2	71.36
3.0	12.90	7.1	31.46	11.2	50.85	15.3	71.89
3.1	13.34	7.2	31.93	11.3	51.35	15.4	72.42
3.2	13.78	7.3	32.39	11.4	51.85	15.5	72.95
3.3	14.22	7.4	32.86	11.5	52.35	15.6	73.48
3.4	14.66	7.5	33.32	11.6	52.85	15.7	74.01
3.5	15.10	7.6	33.79	11.7	53.35	15.8	74.54
3.6	15.54	7.7	34.25	11.8	53.85	15.9	75.07
3.7	15.98	7.8	34.72	11.9	54.35	16.0	75.60
3.8	16.42	7.9	35.18	12.0	54.85		
3.9	16.86	8.0	35.65	12.1	55.36		
4.0	17.30	8.1	36.11	12.2	55.87		