STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
OLYMPIA

ORDER NO. 1071

Effective December 1, 1967

RULES AND REGULATIONS RELATING TO STANDARDS FOR RETORTS AND PRESSURE COOKERS USED IN PROCESSING LOW ACID FOODS IN HERMETICALLY SEALED CONTAINERS IN AN ATMOSPHERE OF PURE SATURATED STEAM, REQUIREMENTS FOR CODE MARKING OF CONTAINERS, RECORDS OF PRODUCTS PROCESSED AND PROCESS REQUIREMENTS.

I, Donald W. Moos, Director of Agriculture of the State of Washington, after public notice and hearing held at Olympia, Washington on September 7, 1967 and recessed to October 11, 1967, by virtue of authority vested in me under Chapter 34.04, Chapter 69.04, Revised Code of Washington, and Chapter 121, Laws of Extraordinary Session, 1967, do hereby promulgate the following regulations governing processing of low acid foods:

REGULATION 1. Definitions. As used in Regulations 2 through 9.

(1) "Department" means the State Department of Agriculture.

(2) "Cannery" means any establishment where food is processed and preserved in hermetically sealed containers.

(3) "Low acid foods: means with a pH value greater than 4.5.

(4) "Commercial sterilization" when applied to low acid foods packed in hermetically sealed containers means treatment sufficient to destroy pathogenic or toxigenic organisms of greatest known resistance in properly equipped and operated retort equipment approved by the department.

(5) "Process" means heat treatment in terms of time and temperature sufficient to accomplish commercial sterilization of low acid food products packed in hermetically sealed containers published on pages 28 to 52 of the 10th edition of Bulletin 26-L dated September 1966 by the National Canners Association, Washington, D. C. or an equivalent process accepted by Department.

(6) "Retort" or "pressure cooker" means nonagitating and discontinuous type equipment used to process low acid foods in hermetically sealed containers in an atmosphere of pure saturated steam to accomplish commercial sterilization.

(7) "Coming-up time" means the time which elapses between the turning on of the steam and the time the retort reaches the processing temperature.

(8) "Initial Temperature" means the average temperature of the contents of the container at the time the steam is turned on in the retort for the process. This container should be representative of the coldest cans in the retort load and should have an initial temperature equal to or greater than the initial temperature specified in the process being used.

(9) "Vent" is a valve-controlled opening into a retort, used for the elimination of air during the coming-up time.

(10) A "retort bleeder" is an opening of at least one-eighth inch into a retort which is open during the entire process for the removal of air that may enter the retort with the steam or through a leaky air valve.

(11) A "thermometer bleeder" is a one-eighth inch or larger opening into a thermometer well or pocket. This bleeder is open during the entire process to ensure a continuous flow of steam from the retort past the thermometer bulb in order that the temperature shown will be the same as that in the retort.

(12) An approved type of "plug-cock valve" is one which permits an unrestricted flow of air through the valve.

(13) Pipe size means internal pipe size (I.P.S.).

REGULATION 2. Required equipment for nonagitating and discontinuous retorts for commercially sterilizing food in hermetically sealed containers processed in an atmosphere of pure saturated steam.

(1) Recording thermometer.

(a) Each retort shall be equipped with a recording thermometer which shall be adjusted to agree with the mercury thermometer.

(b) The temperature chart shall be easily readable to 1 degree F. and shall be graduated in not to exceed 2 degrees F. divisions within the range of plus or minus 10 degrees F. of the official process to be used. All charts shall have a working scale of not less than three inches.

(c) No temperature chart shall be used in a recording thermometer unless it is a chart designed for the recording thermometer used on a retort.

(d) It shall be unlawful to use charts with the temperature indicated in code.

(e) Every recording thermometer shall bear the name plate of the original manufacturer having the serial number assigned by the manufacturer, and the manufacturer's chart number die stamped thereon.

(f) All recording thermometers shall be so placed with respect to light that they are conveniently readable.

(2) Mercury thermometer

(a) Each retort shall be equipped with an indicating mercury-in-glass thermometer calibrated in degrees Fahrenheit and accurate to the smallest division of the thermometer scale at the temperature specified for the process.

(b) The mercury thermometer shall have a temperature range of not more than 100 degrees F. (170 degrees F. - 270 degrees F.) on a scale of at least 7 inches nominal length.

(c) The scale division shall be easily readable to 1 degree F. and shall not exceed 20 degrees F. per inch of graduated scale.

(d) All mercury thermometers shall be placed in respect to light so that they are conveniently readable by the operator.

(e) Mercury thermometers used by each licensee on retorts shall be annually tested for accuracy by the department.

(3) Pressure gauge.

(a) Every retort shall have a properly functioning pressure gauge of the Bourdon type in which the operating mechanism is a complete unit independent of the case. Every gauge shall be equipped with a compensating hair spring.

(b) The minimum diameter of the dial shall be two and one-half inches and located so as to be conveniently readable by the retort operator.

(c) The range of the pressure scale shall be 0 to 30 pounds. A combination vacuum-pressure gauge with a maximum pressure of 30 pounds may be used.

(4) Valves for removal of condensate and air.

(a) Condensate shall not be allowed to accumulate in retorts.

(b) To assure that condensate will not accumulate in a retort during the process, a one-eighth inch or larger petcock or valve shall be installed or a hole drilled in the drain or bottom of the retort and it shall remain open during the entire processing time.

(c) If retorts are equipped with air for pressure cooling, a globe valve must be used on the air line. Air leakage into the retort must be avoided since steam-air mixture will reduce the effectiveness of the process and result in underprocessing.

(5) By-pass around diaphragm control valve on steam inlet. Each diaphragm control valve shall be equipped with a by-pass to allow for hand control in case of an emergency.

(6) Steam inlet.

(a) Horizontal Retorts:

(A) For retorts more than 20 feet in length, the steam shall enter the spreader pipe near the center of the retort. For retorts less than 20 feet in length, the steam may enter the spreader pipe either at the center or at the end. If steam enters at the end, the spreader pipe shall be no smaller than the steam inlet.

(B) The retort shall be equipped with an adequately perforated pipe extending throughout the entire length of the bottom of the retort with perforations arranged so that the steam is directed up and into the load of food containers. The ends of the steam spreader shall be closed.

(b) Vertical Retorts: If steam is admitted into the bottom of the retort, it shall be directed up into the load of food containers. Any other position of the steam inlet must be approved by the department.

Note: Recommended Number of Holes in Steam Spreaders for Steam Inlet Pipe Sizes

Size Holes (inches)	1 inch pipe	1-1/4 inch pipe	1-1/2 inch pipe	2 inch pipe	2-1/2 inch pipe
3/16	47-62	81-108	111-148	183-244	260-346
1/4	27-36	45-60	63-84	102-137	147-196
3/8	-	21-28	28-37	45-60	66-88
1/2	-	-	15-20	26-36	36-48

(7) Retort bleeders.

(a) For Horizontal Retort:

(A) A horizontal retort shall be equipped with bleeders along the top of the retort not more than eight feet apart and there shall be one within approximately one foot of each end of the retort. These bleeders shall be kept wide open during the entire process.

(B) Any bleeder at least one-eighth inch in size on a thermometer well may be considered to comply with this requirement when the well is in the top of the retort and located at the proper place.

(b) For Vertical Retort: A vertical retort shall be equipped with a bleeder at the end of the retort opposite the steam inlet. This bleeder shall be wide open during the entire process. In the case of very small retorts (less than 30-inch diameter and less than four feet in depth) a three-thirty-second inch bleeder may be used.

(c) Bleeders are not to be substituted for vents or vice versa.

(8) Thermometer Bleeders. Bleeders for all thermometers on All type of retorts. A one-eighth inch (1/8") or larger bleeder hole shall be kept open for the free escape of steam on all thermometer fittings unless thermometer bulbs are set wholly within the shell of retort proper. The bleeders shall be so located as to provide a full flow of steam past the sensitive part of the thermometer bulb.

(9) Vents for removal of air from retorts during coming-up period. Vents shall be installed and operated in such a way that all the air is removed from the retort before timing of the process is started.

NOTE: See the venting systems described under Regulations 6 and 7 of these regulations.

(10) Stacking equipment for use in horizontal and vertical retorts.

(a) Stacking equipment (baskets, trays, gondolas, etc.) for all types of containers in discontinuous retorts, when containers are stacked in a vertical position, shall be preferably of strap iron. When perforated sheet metal baskets are used, the perforations in the bottoms shall be at least one-inch holes on two-inch centers or their equivalent, unless other equipment has been approved.

(b) If dividers are used, they shall be of wide mesh material, such as fish nets or onion sacks, or of strap iron or sheet metal having perforations at least the equivalent of one-inch holes on two-inch centers. Close meshed cloth dividers are not permitted.

REGULATION 3. Additional equipment suggested but not required by the Department.

(1) The use of an additional thermometer on each retort is advised to serve primarily as a check instrument, preferably located adjacent to the temperature recorder bulb.

(2) An automatic temperature controller is recommended.

REGULATION 4. Safety Valve.

(1) Retorts shall be equipped with a safety valve of such size and capacities as will comply with the requirements established by the Washington Department of Labor Industries.

IMPORTANT: Policy on existing retort hookups. Retort hookups now in use that approximate but do not exactly conform to the requirements of Regulations 5, 6, 7 and (6) of Regulation 2 shall be allowed to continue in operation subject to approval by the department, providing that on investigation by the department it is determined that the particular retort hookup is capable of providing the necessary safety factors in accomplishing commercial sterilization of low acid foods as required by these regulations.

REGULATION 5. Venting of retorts for removal of air, general considerations.

(1) Vents (except drains when used as vents) shall be in the opposite side or end of the retort from that at which the steam is admitted.

(2) Vent valves shall be of the gate or plug cock type, preferably quick acting, except where otherwise specified.

NOTE: A globe valve of one pipe size larger than the minimum vent requirement may be substituted for a gate valve.

(3) For the most efficient operation of a retort, containers shall be so stacked, and the stacking equipment shall be of a type such that the air can be removed rapidly enough to permit a uniform distribution of heat throughout the retort at the time processing temperature is attained. Anything which interferes with the free flow of steam through any part of a retort load makes this requirement more difficult to meet.

NOTE: Use of a drain as a vent in conjunction with venting from the top of the retort is permissible and several combinations of top and bottom vents are described. However, it is more desirable to use venting systems which do not involve the use of the drain. Various arrangements of vents may be used to obtain uniform heat distributions throughout a retort.

The following vent arrangements and cycles of operations have been found to give satisfactory heat distribution. Every retort shall be equipped with one of these installations or some other arrangement of vents which is equally satisfactory If venting systems other than those described here are desired, or if shorter coming-up times are to be used, the approval of the department shall first be obtained. A special investigation may be required in order to determine the conditions under which such equipment may be used.

REGULATION 6. Venting of horizontal retorts for removal of air.

NOTE: The following venting specifications are for nonagitating (discontinuous) horizontal retorts not exceeding five and one-half feet inside diameter, and are based on data from tests made with round cans in strap iron trays. There is evidence to indicate that the use of perforated sheet metal trays may necessitate supplementary retort venting or modifications in the stacking of containers.

"System A"

Venting through multiple one-inch vents discharging directly to the atmosphere.

(1) Equipment. A retort shall be equipped with unrestricted one-inch pipes approximately one foot in length, one for each five feet - or fraction thereof - of retort length, approximately symmetrically placed along the top of the shell, uniformly separated and not more than seven feet apart. There shall be one of the above vents within two and one-half feet of each end of the shell.

(2) Operation. The vent valve shall be wide open when steam is admitted to the retort, and shall remain wide open for at least five minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 225 degrees F., or at least seven minutes to at least 220 degrees F.

(3) If vent pipes are to be extended beyond the valves, the extensions shall be of at least one pipe size larger than the vent pipes entering the retort.

"System B"

Venting through the drain valve and through multiple one-inch vents discharging directly to the atmosphere.

(1) Equipment. A retort shall be equipped with unrestricted one-inch pipes approximately one foot in length, one for five feet or fraction thereof - of retort length, approximately symmetrically placed along the top of the shell, uniformly separated and not more than seven feet apart. There shall be one of the above vents within two and one-half feet of each end of the shell.

(2) In addition, the retort shall be equipped with a drain of not less than three-inch pipe size for retorts up to 15 feet in length or of not less than four-inch pipe size for retorts over 15 feet in length.

NOTE: The drain valve may be either globe or gate type.

(3) Operation. The vent valves and the drain valve shall be wide open when steam is admitted to the retort.

(4) The drain valve shall remain wide open for at least two minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 210 degrees F.

(5) The one-inch vent valves shall remain wide open for at least five minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 220 degrees F.

(6) If vent pipes are to be extended beyond the valves, the extensions shall be of at least one pipe size larger than the vent pipes entering the retort.

NOTE: The drain may be extended beyond the valve with pipe the same size as the valve.

"System C"

Venting through multiple one-inch vents discharging through a manifold.

(1) Equipment. A retort shall be equipped with unrestricted one-inch pipes, approximately one foot in length, one for each five feet or fraction thereof - of retort length, approximately symmetrically placed along the top of the shell, uniformly separated, not more than seven feet apart, and connected into a manifold. There shall be one of the above vents within two and one-half feet of each end of the shell. The manifold shall be of 2 1/2 inch pipe size for retorts up to 15 feet in length, and of three-inch pipe size for retorts over 15 feet in length. Venting shall be controlled by a vent valve in a pipe leading from, and of a size not smaller than that of the manifold.

(2) Operation. The vent valve shall be wide open when steam is admitted to the retort, and shall remain wide open for at least six minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 225 degrees F. or at least eight minutes to at least 220 degrees F.

(3) If the vent valve is connected into a discharge pipe or system for removal of steam from the building, the header shall be sufficiently large so that venting will not be impaired.

"System D"

Venting through the drain valve and through multiple one inch vents discharging through a manifold.

(1) Equipment. A retort shall be equipped with unrestricted one-inch pipes approximately one foot in length, one for each five feet - or fraction thereof - of retort length, approximately symmetrically placed along the top of the shell, uniformly separated, not more than seven feet apart and connected into a manifold. There shall be one of the above vents within two and one-half feet of each end of the shell. The manifold shall be of 2-1/2 inch pipe size for retorts up to 15 feet in length, and of three-inch pipe size for retorts over 15 feet in length. Venting shall be controlled by a vent valve in a pipe leading from, and of a size not smaller than that of the manifold.

(2) In addition, the retort shall be equipped with a drain of not less than three-inch pipe size for retorts up to 15 feet in length or of not less than four-inch pipe size for retorts over 15 feet in length.

NOTE: The drain valves may be either gate or globe type.

(3) Operation. The vent valves and drain valve shall be wide open when steam is admitted to the retort.

(4) The drain valve shall remain wide open for at least three minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 210 degrees F.

(5) The vent valve shall remain wide open for at least five minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 220 degrees F.

(6) If the vent valve is connected into a discharge pipe or system for removal of steam from the building, the header shall be sufficiently large so that venting will not be impaired.

"System E"

Venting through the water spreader.

(1) Equipment. The water spreader shall be of not less than 1-1/2 inch pipe size for retorts less than 15 feet in length, with the water inlet connected through the shell so that the spreader pipes extend in both directions from a tee in the water inlet. The water inlet to which the spreader is connected shall be of not less than two-inch pipe size. The vent pipe shall be of at least two-inch pipe size and shall be connected into the water inlet without any restriction in pipe size.

The water spreader shall be of not less than two-inch pipe size for retorts from 15 to 30 feet in length with the water inlet connected through the shell so that the spreader pipes extend in both directions from a tee in the water inlet. The water inlet to which the spreader is connected shall be of not less than 2 1/2 inch pipe size. The vent pipe shall be of at least 2 1/2 inch pipe size and shall be connected into the water inlet without any restrictions in pipe size. If the water enters at or near one end of the retort the water spreader shall be at least as large as the water inlet. For retorts over 30 feet in length, the Department shall be consulted for the proper venting requirements.

(2) The water spreader shall have holes of not less than three-sixteenths-inch diameter distributed uniformly along the length of the spreader pipe, and of sufficient number so that their aggregate area is not less than that of a two-inch I.P.S. (3.34 square inches) for retorts up to 15 feet in length, or not less than that of a 2-1/2 inch I.P.S. (4.75 square inches) for retorts having lengths of 15 to 30 feet.

(3) Operation. The vent valve shall be wide open when steam is admitted to the retort, and shall remain wide open for at least five minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 225 degrees F.; or the vent valve shall remain wide open for at least seven minutes to at least 220 degrees F.

(4) If the vent valve is connected into a discharge pipe or system for removal of steam from the building, the header shall be sufficiently large so that venting will not be impaired.

(5) The following table indicates the minimum number of holes permissible in water spreaders when used for venting:

NUMBER OF HOLES WHOSE TOTAL AREA IS EXACTLY EQUAL TO THE AREA OF THE INLET PIPE

Drill Size Inches	For 1 1/2 inch pipe (2.02 Sq. In.)	For 2 inch pipe (3.34 Sq. In.)	For 2 1/2 inch pipe (4.75 Sq. In.)
3/16	74	121	173
7/32	54	89	127
1/4	42	69	97

"System F"

Venting through the drain valve and through the water spreader.

(1) Equipment. The water spreader shall be of not less than 1-1/2 inch pipe size for retorts less than 15 feet in length, with the water inlet connected through the shell so that the spreader pipe extends in both directions from a tee in the water inlet. The water inlet to which the spreader is connected shall be of not less than two-inch pipe size. The vent pipe shall be of at least two-inch pipe size and shall be connected into the water inlet without any restriction in pipe size. The water spreader shall be of not less than two-inch pipe size for retorts from 15 feet to 30 feet in length with the water inlet connected through the shell so that the spreader pipe extends in both directions from a tee in the water inlet. The water inlet to which the spreader is connected shall be of not less than 2 1/2 inch pipe size. The vent pipe shall be of at least 2 1/2 inch pipe size and shall be connected into the water inlet without any restrictions in pipe size. If the water enters at or near one end of the retort the water spreader shall be of at least the same size as the water inlet.

For retorts over 30 feet in length, the Department shall be consulted for the proper venting requirements.

(2) The water spreader shall have holes of not less than three-sixteenths-inch diameter distributed uniformly along the length of the spreader pipe, and of sufficient number so that their aggregate area is not less than that of two-inch pipe (3.34 square inches) for retorts up to 15 feet in length, or not less than that of a 2 1/2 inch pipe (4.75 square inches) for retorts having lengths of 15 to 30 feet. NOTE: See table in System E (5) for number and size of holes required.

(3) In addition, the retort shall be equipped with a drain of not less than three-inch pipe size for retorts up to 15 feet in length or of not less than four-inch pipe size for retorts over 15 feet in length. The drain valve may be either globe or gate type.

(4) Operation. The vent valve and the drain valve shall be wide open when steam is admitted to the retort.

(5) The drain valve shall remain wide open for at least two minutes after the steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 210 degrees F.

(6) The vent valve shall remain wide open for at least five minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 220 degrees F.

(7) If the vent valve is connected into a discharge pipe or system for removal of steam from the building, the header shall be sufficiently large so that venting will not be impaired.

"System G"

Venting through a single 2-1/2 inch top center vent - for retorts less than 15 feet long.

(1) Venting may be accomplished by the use of a single 2-1/2 inch unrestricted vent located at the top of the shell, provided this vent is within two feet of the center of the retort.

(2) Operation. The vent valve shall be wide open when steam is admitted to the retort, and shall remain wide open for at least four minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 220 degrees F.

If the vent valve is connected into a discharge pipe or system for removal of steam from the building, the header shall be sufficiently large so that venting will not be impaired.

"System H"

Venting through the drain valve and through a single 1-1/2 inch top center vent for retorts less than 15 feet long.

(1) Venting may be accomplished by the use of the drain valve in conjunction with a single unrestricted 1 1/2 inch vent located at the top of the shell, provided the vent is within two feet of the center of the retort.

(2) In addition, the retort shall be equipped with a drain of not less than four-inch pipe size.

(3) Operation. The vent valve and the drain valve shall be wide open when steam is admitted to the retort.

(4) The drain valve shall remain wide open for at least two minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 210 degrees F.

(5) The vent valve shall remain wide open for at least five minutes after steam is turned on, and until the mercury thermometer on the retort indicates a temperature of at least 220 degrees F.

(6) If the vent valve is connected into a discharge pipe or system for removal of steam from the building, the header shall be sufficiently large so that venting will not be impaired.

REGULATION 7. Venting of vertical retorts for removal of air.

(1) The following specifications apply for venting vertical retorts not larger than approximately 42 inches diameter by 96 inches high, when the following equipment is used:

(a) Strap-iron or adequately perforated metal baskets.

(b) Vents located in or near the top of the retort.

(c) At least a one-inch steam line into the bottom of the retort and arranged so that steam is directed up into the load of food containers.

(d) Raised supports for retort basket so constructed that no baffling effect occurs. Baffle plates are not permitted. If dividers are used, they shall be of wide mesh material, such as fish nets or onion sacks, or of strap iron or sheet metal having perforations at least the equivalent of one-inch holes on two-inch centers. Close meshed cloth dividers are not permitted.

"System I"

Venting through a single 1-1/2 inch overflow pipe.

(1) Venting of vertical retort may be accomplished through a 1 1/2 inch overflow pipe if it is connected to the retort within at least 10 inches of the top of the shell. The overflow pipe shall have not more than eight feet of 1 1/2-inch pipe beyond the valve. If the vent pipe discharges into a manifold, the manifold shall be sufficiently large so that venting will not be impaired.

(2) Operation. The vent valve shall be wide open when steam is turned on, and it shall remain wide open for at least four minutes after steam is turned on and also until the mercury thermometer reaches a temperature of at least 218 degrees F. or for at least five minutes to at least 215 degrees F.

"System J"

Venting through a single one-inch top vent.

(1) Venting of a vertical retort may be accomplished through a single unrestricted one-inch vent located in the lid of the retort. This vent shall be equipped with a one-inch gate valve and shall discharge into the atmosphere, with not more than four feet of one-inch pipe beyond the valve.

(2) The vent valve shall be wide open when steam is turned on, and it shall remain wide open for at least five minutes after steam is turned on and also until the mercury thermometer reaches a temperature of at least 230 degrees F. or for at least seven minutes to at least 220 degrees F.

REGULATION 8. Records.

(1) Coding. Each cannery must submit to the department a code to appear legibly on the surface of each container that will identify the packer. This code will show the plant where packed, year packed, the product contained therein, batch number or day code. It is understood by the packer that where the container coding to identify each day's production does not identify production for specific periods of the day that the entire day's production shall be considered as one batch in question.

(2) Process record. Each licensee shall keep a daily process record on an approved form, filled in at the time the specific retort operation is observed. The record shall be separate for each batch load and shall include the product, the batch number, the code and the size of containers in each batch, the approximate number of containers in each batch, the processing time and temperature for each batch, and the readings of the recording thermometer, the indicating thermometer, and the pressure gauge for each batch taken after the proper process temperature has been reached.

(3) Recording temperature chart record. Each chart of the recording thermometer shall show the full time and temperature as required for each batch, and the batch number shall be recorded in each respective curve of the chart at the end of each day's operation.

(4) Filing records. Each process record and recording thermometer chart shall be dated and signed by authorized company personnel, shall be held for not less than 24 months, and shall at all times during this period be available to the department.

REGULATION 9. Process requirements.

(1) All low acid foods packed in hermetically sealed containers, except those under pH control as approved by the department, shall be subject to the specific requirements as to initial temperature, process time and temperature as determined for each product established by these regulations to accomplish commercial sterilization.

(2) Process time and temperature for commercial sterilization shall conform to processes for each specific food product as published on pages 28 to 52 of the 10th edition of Bulletin 26-L dated September 1966 by the National Canners Association, Washington, D. C. of which copies are on file with the Department.

REGULATION 10. Authority to establish process requirements, process time and temperature standards and equipment standards.

(1) Process time and temperature standards for food products not listed in the 10th edition of Bulletin 26-L by the National Canners Association may be established by the Department in consultation with the National Canners Association Research Laboratory, Seattle, or qualified departments of the state universities.

(2) The Department may approve process time and temperatures and establish equipment standards for other than non-agitating and discontinuous type retorts if the retorts are used to process low acid foods in hermetically sealed containers in an atmosphere of pure saturated steam and have been shown to be equally effective in commercially sterilizing food products in hermetically sealed containers.

I hereby certify that the foregoing is a true and correct copy of the regulations promulgated by the Department of Agriculture.

Donald W. Moos
Director of Agriculture
State of Washington

Signed at Olympia, Washington

Date: October 20, 1967.