

STATE OF WISCONSIN )  
 )  
DEPARTMENT OF AGRICULTURE, ) SS.  
TRADE & CONSUMER PROTECTION )

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, William D. Mathias, Administrator of the Food Division of the State of Wisconsin, Department of Agriculture, Trade and Consumer Protection, and custodian of the official records of said Division, do hereby certify that the annexed order adopting Chapter Ag 41, Wis. Adm. Code, relating to bottled drinking water and soda water beverages on August 31, 1988.

I further certify that said copy has been compared by me with the original on file in the Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Department offices in the city of Madison, this 31 day of August, 1988.

William D. Mathias  
William D. Mathias  
Administrator  
Food Division

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ORDER OF THE STATE OF WISCONSIN  
DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION  
ADOPTING, AMENDING OR REPEALING RULES

The Wisconsin department of agriculture, trade and consumer protection adopts the following order to repeal and recreate ch. Ag 41 relating to bottled drinking water and soda water beverages.

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Analysis Prepared by the  
Department of Agriculture, Trade and Consumer Protection

- Statutory authority: ss. 93.07(1), 97.29(5) and 97.34(2), Stats.
- Statutes interpreted: ss. 97.02, 97.03, 97.10, 97.29 and 97.34, Stats.

These rules apply to establishments at which soda water beverages or bottled drinking water products are processed for sale as food. The rules repeal and recreate current rules under ch. Ag 41, Wis. Adm. Code, which apply only to soda water beverage establishments. Currently, both bottled drinking water and soda beverage establishments must be licensed under s. 97.29, Stats. (as created by 1987 Wis. Act 399). Ingredient water for soda water beverages and bottled drinking water must comply with state drinking water standards, pursuant to s. 97.34, Stats. The rules therefore repeal and recreate ch. Ag 41 to conform to the new statutory requirements. The rules also clarify and modernize sanitation requirements for soda water beverage and bottled drinking water establishments.

The rules conform with both state and federal requirements by establishing basic uniform standards for the sanitary processing and handling of raw materials and finished products in bottled water and soda water beverage establishments. Each type of establishment is required to maintain clean and sanitary structures and facilities for handling ingredient water, flavorings, colors and other constituents of the final product. The rules also establish basic standards of cleanliness and hygiene for processing establishment personnel, and basic sanitation requirements for equipment and utensils used in the processing or handling of ingredients and finished products.

Ingredient water and operations water used for soda water beverages and bottled drinking water must be obtained from an approved source which complies with applicable provisions of NR 111 and NR 112. Operations water must comply with microbiological standards under NR 109 and NR 140.10. Ingredient water must comply with NR 109 and the microbiological standards under NR 140.10. Ingredient water obtained from privately-owned sources must also comply with the health-related groundwater enforcement standards under NR 140.10. Specific sampling and testing requirements are established for operations water and ingredient water obtained from privately-owned sources.

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1 SECTION 1. Ch. Ag 41 is repealed and recreated to read:

2 CHAPTER AG 41

3 SODA WATER BEVERAGE AND

4 BOTTLED DRINKING WATER ESTABLISHMENTS

5 Ag 41.01 DEFINITIONS. As used in this chapter:

6 (1) "Approved sanitizer" means a substance or compound approved by  
7 the department for the sanitizing of equipment or utensils under s.  
8 Ag 41.08.

9 (2) "Approved source" means a source for ingredient water or  
10 operations water, or both, which has been inspected and found to be  
11 in compliance with ch. NR 111 or ch. NR 112, whichever is appli-  
12 cable. An approved source may include a spring, artesian well,  
13 drilled well or municipal water supply.

14 (3) "Bottle" means the immediate package or container in  
15 which bottled drinking water or soda water beverage is sold or dis-  
16 tributed for consumption. "Bottle" includes a bottle cap or other  
17 seal for a bottle.

18 (4) "Bottled drinking water" means bottled drinking water as  
19 defined in s 97.34(1)(a), Stats.

1 (5) "C-I-P system" means equipment which is designed, con-  
2 structed and installed to be cleaned in place by the internal cir-  
3 culation of cleaning and sanitizing solutions onto product contact  
4 surfaces.

5 (6) "Department" means the state of Wisconsin department of  
6 agriculture, trade and consumer protection.

7 (7) "Equipment" means an implement, vessel, machine or  
8 apparatus, other than a utensil, which has one or more product  
9 contact surfaces and is used in the manufacture or bottling of soda  
10 water beverages or bottled drinking water at a processing  
11 establishment. "Equipment" includes C-I-P systems.

12 (8) "Ingredient water" means water used by an establishment  
13 as an ingredient for bottled drinking water or soda water  
14 beverages.

15 (9) "Operations water" means water which is delivered under  
16 pressure to a processing establishment for bottle washing, hand  
17 washing, cleaning of equipment and utensils, or other cleaning and  
18 sanitizing purposes.

19 (10) "Product" means bottled drinking water or soda water  
20 beverage, and all ingredients of bottled drinking water or soda  
21 water beverage.

22 (11) "Processing" means the manufacture, preparation or pack-  
23 aging of product. "Processing" includes the handling and storage  
24 of unpackaged product, and the inspection and cleaning of bottles  
25 prior to filling.

26 (12) "Processing establishment" means an establishment used or  
27 intended to be used in the processing of soda water beverages

1 or bottled drinking water, and every part of the establishment that  
2 may affect the sanitary condition of product processed in the  
3 establishment.

4 (13) "Product contact surface" means any surface of equipment  
5 or utensils with which product normally comes in direct contact,  
6 or from which materials may drain, drip or otherwise be drawn into  
7 product.

8 (14) "Sanitize" means to destroy pathogens and other  
9 organisms, to the maximum practicable extent, by the application of  
10 an approved sanitizer or sanitizing method to product contact sur-  
11 faces of utensils or equipment which are otherwise clean.

12 (15) "Single service article" means any equipment part,  
13 utensil or bottle which is designed to be used only once prior to  
14 disposal.

15 (16) "Soda water beverage" means a soda water beverage as  
16 defined in s. 97.34(1)(b), Stats.

17 (17) "Utensil" means a portable or hand-held container or  
18 device, such as a tong, spatula, or scoop, which has one or more  
19 product contact surfaces and is used in the processing of  
20 soda water beverages or bottled drinking water at a processing  
21 establishment. "Utensil" does not include a bottle.

22 Ag 41.02 PROCESSING ESTABLISHMENT; CONSTRUCTION AND

23 MAINTENANCE. (1) CONSTRUCTION AND MAINTENANCE; GENERAL.

24 Buildings, facilities and equipment used in the operation of a  
25 processing establishment shall be of sound construction, and shall  
26 be capable of being maintained in a clean and sanitary condition to  
27 prevent the adulteration or contamination of product. The interior

1 and exterior portions of a processing establishment, and the  
2 premises on which the processing establishment is located, shall be  
3 kept free of unhealthful or insanitary conditions, and shall be  
4 maintained in compliance with this chapter.

5 (2) FLOORS, WALLS AND CEILINGS. Floors, walls and ceilings  
6 in a processing establishment shall be kept clean and in good  
7 repair. Floors, walls and ceilings in processing areas, toilet  
8 rooms, and areas used for the cleaning or storage of equipment or  
9 utensils shall be constructed of smooth, impervious and easily  
10 cleanable materials. This does not prohibit the use of easily  
11 cleanable anti-slip floors. Walls and ceilings in processing areas  
12 shall be light colored. Establishments constructed, substantially  
13 reconstructed or extensively altered after August 1, 1988 shall  
14 conform to the following requirements:

15 (a) The junctions of walls and floors in processing areas  
16 shall be coved to facilitate cleaning.

17 (b) Floors which are waterflushed for cleaning, or on which  
18 water or fluid wastes are discharged, shall have an adequate number  
19 of floor drains and be adequately sloped to ensure proper drainage  
20 to the floor drains.

21 (c) At least one service sink or curbed floor drain shall be  
22 provided for use in the cleaning of mops or wet floor cleaning  
23 tools, and for the disposal of mop water or similar wastes.

24 (3) PROCESSING AREA SEPARATED. Within a processing estab-  
25 lishment, areas used to process unpackaged product shall be sep-  
26 arated from areas used for other operations. No processing may be  
27 conducted in a room used as living or sleeping quarters. If a

1 processing room shares one or more walls with adjacent living or  
2 sleeping quarters, processing operations shall be separated from  
3 the adjacent living or sleeping quarters by a tight-fitting, self-  
4 closing door.

5 (4) DOORS AND WINDOWS. Doors, windows, skylights, transoms  
6 and other openings to the outside shall be tight-fitting, free of  
7 breaks, and effectively screened or protected against the entry of  
8 rodents, insects, birds and other animals. Doors opening to the  
9 outside shall be self-closing.

10 (5) LIGHTING. (a) General. Lighting in every area of the  
11 processing establishment, whether natural or artificial, shall be  
12 sufficient for the purpose for which the area is used. Artificial  
13 lights in processing areas shall be equipped with protective  
14 shields or shatter resistant bulbs.

15 (b) Illumination of processing surfaces. There shall be not  
16 less than 20 foot candles (215 lux) of illumination on all  
17 processing surfaces. On surfaces used to inspect washed return-  
18 able bottles, there shall be not less than 100 foot candles (1075  
19 lux) of illumination.

20 (c) Illumination of other areas. Except as provided in  
21 par. (a), the interior of a processing establishment shall be  
22 illuminated to the following levels measured 3 feet from the  
23 floor:

24 1. Not less than 20 foot candles (215 lux) in processing  
25 areas, equipment and utensil cleaning areas, handwashing areas and  
26 toilet areas.

27

1           2. Not less than 10 foot candles (108 lux) in product stor-  
2 age areas.

3           (6) VENTILATION. All areas in which product is processed or  
4 handled, or in which equipment or utensils are cleaned, and all  
5 dressing rooms, locker rooms, toilet rooms, and garbage or rubbish  
6 storage areas shall have sufficient ventilation to remove  
7 excessive heat, steam, condensation, vapors, obnoxious odors and  
8 smoke. Exhaust ventilation systems in processing areas shall  
9 comply with s. ILHR 64.67. Ventilating units shall be positioned  
10 so that exhaust air is not vented onto product, or onto clean  
11 bottles, equipment or utensils. Intake fans shall be equipped  
12 with filters that are readily removable for cleaning and  
13 replacement. Exhaust fans, intake fans and ventilation ducts  
14 shall be kept clean and in good repair, and shall be screened or  
15 louvered to prevent contamination of product by dust, dirt,  
16 insects or other contaminants.

17           (7) TOILET FACILITIES. A sufficient number of sanitary  
18 toilets to accommodate all employes, in compliance with applicable  
19 state and local regulations, shall be provided in convenient  
20 locations. Toilet rooms shall be completely enclosed,  
21 well lighted and equipped with tight-fitting, self-closing doors.  
22 Doors may not open directly into processing areas. Toilet rooms  
23 and fixtures shall be easily cleanable, and shall be kept clean  
24 and in good repair. A sign directing employes to wash their hands  
25 before returning to work shall be posted in all toilet rooms used  
26 by employes. Handwashing facilities, including hot and cold  
27 running water, a supply of soap or detergent, and sanitary single-

1 service means for drying hands shall be conveniently located in  
2 toilet rooms. An easily cleanable, covered trash receptacle and a  
3 supply of toilet tissue shall be provided in each toilet room at  
4 all times. Toilet rooms constructed, substantially reconstructed  
5 or extensively altered after August 1, 1988 shall be separately  
6 vented to the outside, and shall be equipped with an exhaust  
7 fan capable of creating a negative pressure within the toilet  
8 facility.

9 (8) LOCKER AND LINEN FACILITIES. Lockers or comparable  
10 facilities shall be provided for clothing and similar personal  
11 items of employes. Clothing and personal items of employes may  
12 not be stored in processing areas or in areas where bottles,  
13 equipment or utensils are cleaned or stored. Damp or soiled linen  
14 and clothing shall be placed and kept in non-absorbent containers  
15 or laundry bags until removed for laundering. Damp or soiled  
16 linen and clothing shall be removed as often as necessary to  
17 prevent the creation of unsanitary conditions.

18 (9) HANDWASHING FACILITIES FOR PROCESSING AREAS.  
19 Handwashing sinks with available hot and cold running water shall  
20 be provided for use by employes working in all processing areas.  
21 The sinks shall be conveniently located for use by employes, and  
22 shall be kept in a clean and sanitary condition. A supply of soap  
23 or detergent, and sanitary single-service means for drying hands  
24 shall be available at the sink. If disposable towels are  
25 used, clean waste receptacles shall be provided for their  
26 disposal. In establishments constructed, substantially  
27 reconstructed or extensively altered after August 1, 1988,

1 handwashing sinks shall be of a type which are not hand operated.

2 (10) OPERATIONS WATER. Operations water shall be:

3 (a) From an approved source.

4 (b) Provided in a consistently adequate quantity for the  
5 purposes for which it is used.

6 (c) In compliance with the microbiological standards under  
7 ss. NR 109.30 and NR 140.10. If a privately owned water system is  
8 used as the source of operations water, the operator of the  
9 processing establishment shall collect and analyze a sample of the  
10 water at least once annually. Microbiological analyses shall be  
11 conducted in a laboratory certified under s. 143.15, Stats.  
12 Records of microbiological analysis shall be kept on file on the  
13 premises for a period of 5 years.

14 (11) CLEANING FACILITIES; WASH AND RINSE SINK. If equipment,  
15 utensils or bottles are manually washed or sanitized in a  
16 processing establishment, the processing establishment shall be  
17 equipped with a wash and rinse sink which is suitable for all  
18 manual cleaning and sanitizing operations. The sink shall be  
19 constructed of stainless steel or other approved material and be  
20 located in or immediately adjacent to the processing area. Each  
21 sink compartment shall be large enough to accomodate the immersion  
22 of at least 50% of the largest item to be cleaned and sanitized in  
23 the sink. Each compartment of the sink shall be served by hot and  
24 cold running water. If manual sanitizing is done with steam, the  
25 sink shall have at least 2 compartments. If manual sanitizing is  
26 done with chemicals, the sink shall have at least 3 compartments.

27

1 (12) EXTERIOR PREMISES. Premises on which processing  
2 establishments are located shall be well drained and kept in a  
3 clean and orderly condition, free from accumulations of trash,  
4 garbage, and other potential health nuisances. Driveways and  
5 parking lots surrounding the processing establishment shall be  
6 graded to ensure adequate drainage, and shall be surfaced or  
7 maintained to minimize airborne dust and dirt.

8 (13) SEWAGE AND WASTE DISPOSAL. Sewage and waste materials  
9 shall be disposed of in a sanitary manner and in compliance with  
10 applicable state and local laws and regulations. Garbage and  
11 other refuse may not be allowed to accumulate in or about the  
12 processing establishment, and shall be removed as often as nec-  
13 essary to maintain the premises in a clean and sanitary condition.  
14 Garbage storage areas shall be constructed and maintained so that  
15 they do not attract or harbor insects, rodents or other animals.  
16 Garbage and refuse shall be held in durable, easily cleanable,  
17 insect and pest-resistant containers. Containers shall be kept  
18 covered with tight-fitting lids, and shall be cleaned as necessary  
19 after being emptied and before reuse. Garbage and other refuse  
20 may not be burned on the premises unless the burning complies with  
21 state and local laws and regulations. Garbage and refuse may not  
22 be burned on the premises if the burning may contaminate  
23 processing areas or products.

24 (14) CONTROL OF INSECTS, RODENTS AND OTHER VERMIN. Effective  
25 measures shall be taken, as necessary, to control  
26 insects, rodents and other vermin in a processing establishment.  
27 Pesticides may not be stored, handled or used in a manner

1 inconsistent with label directions, or in a negligent manner.  
2 Pesticides and hazardous substances may not be stored or used in a  
3 manner which may contaminate product, equipment, utensils or  
4 bottles, or which may constitute a hazard to employes or the  
5 public.

6 NOTE: Pesticide storage and use must comply with  
7 ss. 94.67 to 94.71, Stats., and ch. Ag 29. Pesticides  
8 must be registered for use by the U.S. Environmental  
9 Protection Agency or by the department.

10 (15) CONSTRUCTION; PLAN REVIEW. Before a processing  
11 establishment is constructed, substantially reconstructed or  
12 extensively altered, the operator of the processing establishment  
13 shall notify the department in writing. Plans and specifications  
14 for the construction or alteration may be submitted to the  
15 department for review before the work is begun.

16 Ag 41.03 PERSONNEL STANDARDS. (1) CLEANLINESS. Employes  
17 working at processing establishments shall maintain a high degree  
18 of personal cleanliness, and shall observe good hygienic practices  
19 during all working periods. Employes shall wash their hands  
20 before beginning work and upon returning to work after using  
21 toilet facilities, eating, smoking or engaging in other activities  
22 which may soil or contaminate the hands. Employes shall keep  
23 their fingernails clean and neatly trimmed.

24 (2) CLOTHING AND JEWELRY. Clean, washable outer garments  
25 and effective hair restraints, including effective hair restraints  
26 for beards longer than 1/2 inch, shall be worn by all employes  
27 working in processing areas. Hair restraints may include hair  
nets, caps and snoods, but do not include hairsprays or headbands.

1 Employes shall remove all jewelry from their hands and fingers  
2 before having any direct manual contact with product or product  
3 contact surfaces. Jewelry may not be worn in a manner which  
4 creates a risk of product contamination. This subsection does not  
5 apply to plain band wedding rings.

6 (3) COMMUNICABLE DISEASE. No person who is infected with a  
7 disease or illness which is communicable by product handling may  
8 work in a processing establishment in any capacity which may  
9 result in the contamination of product. If the department reason-  
10 ably suspects that a person engaged in handling product is  
11 infected with a disease or illness which is communicable by  
12 product handling, the department may prohibit that person from  
13 engaging in product handling until the person submits to an  
14 appropriate medical test or examination to confirm whether or not  
15 the person is infected with the suspected disease or illness.

16 (4) USE OR CONSUMPTION OF FOOD, BEVERAGES, AND TOBACCO.  
17 Food, beverages and tobacco may not be consumed at processing  
18 establishments except in designated areas. Designated areas shall  
19 be separate from areas used for processing, or for cleaning or  
20 storing bottles, equipment or utensils.

21 Ag 41.04 EQUIPMENT AND UTENSILS. (1) CONSTRUCTION AND  
22 MAINTENANCE; GENERAL. Equipment and utensils shall be of sanitary  
23 design and construction. Equipment and utensils shall be readily  
24 accessible for cleaning and inspection and shall be constructed so  
25 that they can be easily cleaned. Equipment and utensils shall be  
26 kept clean and in good repair.

27 (2) PRODUCT CONTACT SURFACES. Product contact surfaces of

1 equipment and utensils shall be constructed of stainless steel or  
2 other materials which are smooth, impervious, nontoxic, non-  
3 corrosive and nonabsorbent. Product contact surfaces shall be  
4 smooth, easily cleanable and durable under normal use conditions,  
5 and shall be free of breaks, open seams, cracks or similar  
6 defects. Product contact surfaces may not impart any odor, color,  
7 taste or adulterating substances to product. Product contact  
8 surfaces, other than product contact surfaces of approved C-I-P  
9 systems, shall be readily accessible for manual cleaning. A  
10 product contact surface may not include a V-thread unless a V-  
11 thread is needed for functional or safety reasons. Threads shall  
12 be of a sanitary type.

13 (3) C-I-P SYSTEMS. C-I-P systems shall be of sanitary  
14 design and construction, and shall be installed and maintained for  
15 sanitary operation. A C-I-P system shall be installed and  
16 maintained so that cleaning and sanitizing solutions can be  
17 circulated throughout all interior product contact surfaces of the  
18 system. C-I-P systems shall be self-draining, or shall be capable  
19 of being easily and completely drained. A temperature recording  
20 device, which accurately records the return temperatures of  
21 cleaning and sanitizing solutions on a temperature recording  
22 chart, shall be installed in all circuits through which cleaning  
23 and sanitizing solutions are circulated. C-I-P systems, including  
24 C-I-P pipeline systems, may not be used without department  
25 approval. Within 14 days after the operator of a processing  
26 establishment requests approval for a C-I-P system, the department  
27 shall grant or deny approval.

1 (4) PIPELINES. (a) Rigid pipelines. Except as provided in  
2 par. (b), pipelines used to transport product within a processing  
3 facility, and all return solution lines forming part of a C-I-P  
4 pipeline system, shall be rigid and self-draining. Pipelines  
5 shall have a minimum slope of one inch per 10 feet to assure  
6 proper drainage and shall be supported to maintain uniform slope  
7 and alignment. Joints of permanently mounted pipelines shall be  
8 welded or equipped with fittings designed for cleaning in place.  
9 Welded joints shall be smooth and free of defects, and demountable  
10 fittings shall be designed to form substantially flush interior  
11 joints. If gaskets are used, they shall be self-positioning, and  
12 shall comply with sub. (2).

13 (b) Flexible pipelines. If a rigid pipeline is not prac-  
14 tical, a flexible pipeline not exceeding 25 feet in length may be  
15 used to transfer product within a processing establishment. A  
16 flexible pipeline shall be transparent, and shall be made of  
17 plastic or other sanitary material which complies with sub. (2).  
18 A processing establishment shall have appropriate equipment and  
19 facilities for cleaning, sanitizing, and drying the interior  
20 product contact surface of a flexible pipeline.

21 (5) LOCATION AND INSTALLATION OF EQUIPMENT. Equipment which  
22 cannot be easily moved shall be installed in a manner which pre-  
23 vents liquid or debris from accumulating under or around the  
24 equipment. Equipment shall be installed so that there is adequate  
25 clearance on all sides for cleaning and maintenance. This does  
26 not apply to that portion of a tank or container which is designed  
27 and installed to protrude through the wall or ceiling of a

1 processing establishment.

2 NOTE: Equipment should normally be installed at least  
3 24 inches from any wall or object which is more than 48  
4 inches long.

5 (6) LUBRICATION. Equipment shall be designed and con-  
6 structed so that gear and bearing lubricants do not come in con-  
7 tact with product or product contact surfaces. If incidental  
8 product contact may occur, only food grade lubricants may be  
9 used.

10 (7) PROTECTION AGAINST DRAINAGE, SPLASH AND CONDENSATION.  
11 Product containers shall be covered, and shall be protected to  
12 prevent splash or drainage of liquids onto product or product con-  
13 tact surfaces. Openings shall be protected against surface drain-  
14 age. Aprons to divert condensation shall be installed in con-  
15 nection with all pipes, thermometers and other devices extending  
16 into product vessels or containers, unless there is a water tight  
17 joint.

18 (8) CLEANING AND SANITIZING EQUIPMENT AND UTENSILS. Product  
19 contact surfaces of equipment and utensils shall be cleaned after  
20 each use and sanitized before the next use. Sanitizing methods  
21 shall comply with s. Ag 41.08. Cleaning and sanitizing of C-I-P  
22 systems shall comply with manufacturer specifications. Cleaning  
23 and sanitizing records shall be maintained for all C-I-P systems.  
24 The records shall identify every C-I-P system which has been  
25 cleaned or sanitized, the date and time when each C-I-P system was  
26 cleaned and sanitized, the temperature of the cleaning or sani-  
27 tizing solution, and the length of time for which the C-I-P system  
was exposed to each cleaning and sanitizing solution. The records

1 shall be signed or initialed by the operator of the processing  
2 establishment. Records shall be maintained on file at the estab-  
3 lishment for at least 90 days, and shall be made available for  
4 inspection and copying by the department upon request.

5 (9) STORAGE OF CLEAN EQUIPMENT AND UTENSILS. Equipment and  
6 utensils, unless stored in an approved sanitizing solution, shall  
7 be stored so as to drain dry. Equipment and utensils shall be  
8 protected from contamination prior to use.

9 (10) SINGLE-SERVICE ARTICLES. Single-service articles shall be  
10 stored in the original containers in which they were received or in  
11 other closed containers which will protect them from contamination  
12 prior to use. Single-service articles may not be re-used.

13 Ag 41.05 INGREDIENTS AND INGREDIENT SOURCES. (1) SODA WATER  
14 INGREDIENTS. Soda water beverage ingredients shall be safe, wholesome  
15 and unadulterated. Food colors, preservatives, sweeteners and other  
16 ingredients used in the manufacture of soda water beverages shall  
17 comply with applicable standards of identity under s. 97.09, Stats.

18 (2) INGREDIENT WATER. (a) Ingredient water shall be obtained  
19 from an approved source and shall comply with ch. NR 109.

20 (b) Ingredient water, except for soda water beverage ingredient  
21 water obtained from a municipal water supply, shall comply with all of  
22 the health-related enforcement standards under NR 140.10. Soda water  
23 beverage ingredient water obtained from a municipal water supply shall  
24 comply with the microbiological enforcement standards under  
25 NR 140.10.

26 Ag 41.06. PRODUCT HANDLING AND STORAGE. (1) GENERAL.

1 Product shall be protected from contamination during all periods in  
2 which it is stored, processed, handled or held for sale at a  
3 processing establishment.

4 (2) PRODUCT STORAGE AREAS. Product storage areas shall be  
5 maintained in a clean, sanitary and orderly condition, free from  
6 accumulations of litter or other materials which may result in  
7 the contamination of product. Waste water and other waste  
8 materials may not accumulate or drain onto floors in product  
9 storage areas.

10 (3) MANNER OF STORAGE. Product stored at a processing  
11 establishment shall be kept in sanitary containers. Bottles and  
12 other containers in which product is stored shall be sealed or kept  
13 tightly covered. Product shall be stored a minimum of 6 inches  
14 above the floor or on pallets in a manner which protects the  
15 product from splash, damage and other potential sources of  
16 contamination. Product shall be stored away from walls to allow  
17 for cleaning and inspection and to prevent the harborage of insects  
18 and rodents. Product packaged in metal, glass or other vermin  
19 proof containers need not be elevated off the floor or kept away  
20 from walls, provided that floors and walls of the storage area are  
21 clean and not exposed to water or excessive moisture, and provided  
22 that rodents, insects or other vermin do not appear to be present.  
23 Containers used for the packaging or storage of poisonous materials  
24 may not be reused for the packaging or storage of product.

25 (4) DAMAGED STORAGE CONTAINERS. Product may not be stored in  
26 containers that are damaged to the extent that product may be  
27 contaminated. If product is exposed to possible contamination

1 because of damage to storage containers, the product may not be  
2 used or sold for human consumption.

3 (5) FIRE, FLOOD OR CASUALTY DAMAGE. Product which has been  
4 subjected to possible contamination in a fire, flood, or other  
5 casualty may not be offered or reprocessed for sale for human  
6 consumption unless the department has inspected the product and  
7 authorized its sale or disposition. A processing establishment  
8 shall notify the department whenever product in the establishment's  
9 possession has been subjected to possible damage or contamination  
10 because of fire, flood or other casualty.

11 Ag 41.07 BOTTLES. (1) GENERAL. Bottles shall be of sanitary  
12 design and construction, and shall be constructed and sealed to  
13 protect product against contamination. Product contact surfaces of  
14 bottles shall be smooth and free of breaks, cracks or similar  
15 defects. Product may not be packaged or sold in bottles which are  
16 unsanitary, which contain any extraneous or deleterious substance,  
17 or which are damaged to the extent that product may be  
18 contaminated.

19 (2) CLEANING AND SANITIZING RETURNABLE BOTTLES. Returnable  
20 or multi-use bottles shall be effectively cleaned and sanitized  
21 before being refilled. Cleaning and sanitizing shall remove all  
22 extraneous matter and potential adulterants from the bottle before  
23 the bottle is refilled. Sanitizing methods shall comply with s. Ag  
24 41.08. Automatic bottle washing procedures shall comply with  
25 sub. (3).

26 (3) AUTOMATIC BOTTLE WASHING. Bottles cleaned in automatic  
27 bottle washers shall be sanitized while in the washer by means of

1 hot water or chemical treatment. Sanitizers and sanitizing  
2 methods shall comply with s. Ag 41.08. If bottles are sanitized by  
3 being soaked in a caustic solution, the causticity of the sanitizing  
4 solution in the bottle washer shall be monitored and maintained at  
5 an appropriate level in relation to solution temperature and soaking  
6 time. The following table shows minimum causticity levels required for  
7 sanitizing solutions (expressed in terms of percent concentration of  
8 sodium hydroxide, NaOH, in the sanitizing solution), based on  
9 applicable soaking times and temperatures:

10 MINIMUM CAUSTICITY LEVELS REQUIRED FOR SANITIZING  
11 SOLUTIONS (% CONCENTRATION OF NaOH), BASED  
ON SOAKING TIME AND TEMPERATURE

| 12 Time in<br>13 Minutes | Temperature (Degrees) |      |      |      |      |      |      |     |
|--------------------------|-----------------------|------|------|------|------|------|------|-----|
|                          | °F                    | 170  | 160  | 150  | 140  | 130  | 120  | 110 |
|                          | °C                    | 77   | 71   | 66   | 60   | 54   | 49   | 43  |
| 14 3                     | 0.57                  | 0.86 | 1.28 | 1.91 | 2.86 | 4.27 | 6.39 |     |
| 15 5                     | 0.43                  | 0.64 | 0.96 | 1.43 | 2.16 | 3.22 | 4.80 |     |
| 16 7                     | 0.36                  | 0.53 | 0.80 | 1.19 | 1.78 | 2.66 | 3.98 |     |

17  
18  
19 (4) INSPECTION OF RETURNABLE BOTTLES. Returnable or multi-use  
20 bottles, after being cleaned and sanitized, shall be inspected  
21 before being refilled. Inspection shall be adequate to detect  
22 extraneous material and adulterants, and any damage to product con-  
23 tact surfaces. Inspection shall be performed on surfaces lighted in  
24 compliance with s. Ag 41.02(5)(b).

25 (5) SINGLE-SERVICE BOTTLES AND BOTTLE CAPS. Single-service  
26 bottles and bottle caps, and other single-service articles used to  
27 package soda water beverages and bottled drinking water shall be

1 made from clean, sanitary materials. They shall be stored in sanitary  
2 containers, protected from contamination prior to use, and handled in a  
3 sanitary manner. Single-service articles, including single-service  
4 bottles and bottle caps, may not be re-used.

5 Ag 41.08 SANITIZERS AND SANITIZING METHODS. (1) SANITIZING  
6 METHODS. Utensils, food contact surfaces of equipment, and return-  
7 able or multi-use bottles shall be sanitized prior to each use with  
8 one of the following sanitizing methods:

9 (a) Immersion for at least 30 seconds in clean water at a  
10 temperature of at least 170°F (77°C).

11 (b) Immersion for a period of at least 2 minutes in a sani-  
12 tizing solution containing at least 100 ppm of available chlorine at  
13 a temperature not less than 75°F (24°C) nor more than 110°F (44°C).

14 (c) Immersion for a period of at least one minute in a sani-  
15 tizing solution containing at least 12.5 ppm of available iodine,  
16 and having an acid pH not higher than 5.0, at a temperature of not  
17 less than 75°F (24°C) nor more than 110°F (44°C).

18 (d) Application, according to manufacturer's instructions, of  
19 a nontoxic chemical sanitizer or sanitizing method which has been  
20 demonstrated to be equally as effective in the sanitizing of equip-  
21 ment and utensils as the methods described under pars. (a) to (c),  
22 and which has been approved by the department under sub. (3).

23 (e) For bottles, immersion in a caustic sanitizing solution in  
24 a soaker-type bottle washer, as provided in s. Ag 41.07(3).

25 (2) SANITIZERS; MAXIMUM CONCENTRATIONS. Sanitizing solutions  
26 shall not exceed the maximum concentrations established by the food  
27 and drug administration, United States department of health and

1 human services, under 21 CFR 178.1010. A test kit or other device  
2 that measures the concentration of sanitizing solutions in parts per  
3 million shall be used as necessary to ensure compliance with this  
4 subsection at all times.

5 NOTE: Copies of 21 CFR 178.1010 are on file with the  
6 department, the secretary of state and the revisor of  
7 statutes. Copies may be obtained from the department at  
8 cost.

8 (3) SANITIZERS; DEPARTMENTAL APPROVAL. The department shall  
9 approve sanitizers and sanitizing methods which it determines to be  
10 safe and effective for sanitizing equipment, utensils and returnable  
11 or multi-use bottles.

12 NOTE: Sanitizers and sanitizing methods approved by the United  
13 States department of agriculture under the poultry products  
14 inspection act, 21 USC 451 et. seq., or the federal meat  
15 inspection and wholesome meat acts, 21 USC 601 et. seq., or by  
16 the Wisconsin department of health and social services under  
17 subch. III. ch. 50, Stats., will be approved by the department.  
18 The department may deny or withdraw approval of any sanitizer or  
19 sanitizing method, whether or not approved by any other state or  
20 federal agency, if the department determines that the sanitizer  
21 or sanitizing method is not safe or effective for the purposes or  
22 under the conditions used, or that it adversely affects the  
23 sanitary characteristics of equipment, utensils or bottles.  
24 Persons affected by a denial or withdrawal of approval may  
25 request a hearing on the denial or withdrawal of approval,  
26 pursuant to ch. 227, Stats.

20 Ag 41.09 SAMPLING, RECORDS, REPORTING, AND PRODUCT LABELING.

21 (1) PRODUCT SAMPLING TO DETERMINE COMPLIANCE WITH INGREDIENT WATER  
22 STANDARDS. (a) Except as provided in par. (b), the operator of a  
23 processing establishment shall collect and analyze representative  
24 samples of finished product to provide reasonable assurance that the  
25 finished product complies with ch. NR 109 and the health related  
26 enforcement standards of s. NR 140.10. The minimum required frequency  
27 of analysis for a specific contaminant is based on the general category

1 of the contaminant as shown in the following table:

| 2 | <u>Frequency</u> | <u>Product</u>    |
|---|------------------|-------------------|
| 3 |                  | <u>Analysis</u>   |
| 4 | Quarterly        | Bacteria          |
| 4 | Annually         | Nitrate           |
| 5 | Every third year | Volatile Organics |
| 6 |                  | Pesticides        |
| 6 |                  | Inorganics        |
| 7 | Every fifth year | Radionuclides     |

8 NOTE: Initial water samples shall be taken within a year of the  
9 effective date of this chapter. If any sample shows a detectable  
10 level of a contaminant, the sampling frequency shall be increased  
11 to at least an annual basis.

12 (b) Paragraph (a) does not apply to soda water beverages if the  
13 ingredient water is obtained from a municipal water supply. If soda  
14 water beverage ingredient water is obtained from a municipal water  
15 supply, the ingredient water shall be handled in accordance with  
16 current good manufacturing practice, and the operator of the processing  
17 establishment shall provide the department with documentation on  
18 request showing that the municipal water supply is in accordance with  
19 ch. NR 109 and the microbiological standards under NR 140.10.

20 (c) This subsection does not relieve a processor or seller of  
21 product from any other legal duty to test that product for possible  
22 adulteration or contamination.

23 (2) RECORDS AND REPORTING. All processors required to collect  
24 and analyze samples of bottled water and soda water beverage products  
25 under this section shall maintain records of the results of microbio-  
26 logical analyses for 5 years; chemical analyses for 6 years; and radi-  
27 ological analyses for 10 years. All processors of bottled water must  
submit a summary of the results of all required analyses conducted

1 during each calendar year to the department by March 1 of the next  
2 year except that, if the result of any individual analysis exceeds the  
3 established enforcement standard, a copy of that analysis report shall  
4 be submitted to the department within 7 days of the completion of the  
5 analysis.

6 (3) PRODUCT LABELING. Each container of soda water or bottled  
7 water shall be labeled as required under ch. Ag 53 and s. 97.03, Stats.

8 Ag 41.10 EFFECT OF RULES ON LOCAL ORDINANCES. (1) This  
9 chapter does not prohibit or nullify any local government ordinance  
10 with which it is not in direct conflict as provided in sub. (2).

11 (2) In the event of any direct conflict between this chapter  
12 and any local government ordinance, so that compliance with only  
13 one can be achieved by violating the other, this chapter shall be  
14 controlling.

15 (3) Compliance with local government ordinances shall not  
16 relieve any person from the duty of complying with this chapter.

17 SECTION 2. The rules contained in this order shall take  
18 effect on the first day of the month following publication in the  
19 Wisconsin administrative register, as provided in  
20 s. 227.22(2)(intro.), Stats.

21 Dated this 31 day of August, 1988.

22 STATE OF WISCONSIN  
23 DEPARTMENT OF AGRICULTURE,  
24 TRADE AND CONSUMER PROTECTION

25 By William D. Mathias  
26 William D. Mathias  
27 Administrator, Food Division

DEK/T2/1/FOOD4-SP  
6/10/88-18