

**Chapter 16-450 WAC**  
**CONTROLLED ATMOSPHERE STORAGE REQUIREMENTS FOR WASHINGTON FRUITS AND**  
**VEGETABLES**

(Formerly chapters 16-449, 16-459 and 16-690 WAC)

Last Update: 5/6/15

**WAC**

16-450-005	Definitions.
16-450-010	Controlled atmosphere designation.
16-450-012	Identification of controlled atmosphere fruits and vegetables.
16-450-014	Requirements for controlled atmosphere fruit and vegetables entering commercial trade.
16-450-020	Controlled atmosphere licensing requirements.
16-450-028	Controlled atmosphere facility operator requirements.
16-450-041	Controlled atmosphere requirements.
16-450-042	Controlled atmosphere requirements for Bartlett pears.
16-450-044	Controlled atmosphere requirements for winter pears.
16-450-060	Controlled atmosphere requirements for apples.

**DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER**

16-450-016	What is controlled atmosphere storage? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-016, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-022	How can I obtain a license to operate or lease a controlled atmosphere storage facility in Washington state? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-022, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-024	When must I apply for a license to operate or lease a controlled atmosphere storage facility in Washington state? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-024, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-026	Can I renew my license after August 31? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-026, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-032	Violations of this chapter and/or chapter 15.30 RCW. [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-032, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-040	What requirements apply to controlled atmosphere storage facilities? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-040, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-046	When must controlled atmosphere fruits and vegetables be identified for certification? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-046, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-048	What inspection, certification and marking requirements apply to controlled atmosphere fruits and vegetables? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-048, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-050	When is a reinspection of controlled atmosphere fruit and vegetables required? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-050, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.
16-450-070	What if my fruit does not comply with the requirements of this chapter? [Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-070, filed 2/18/04, effective 3/20/04.] Repealed by WSR 15-10-091, filed 5/6/15, effective 6/6/15. Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW.

**WAC 16-450-005 Definitions.** "CA number" means the controlled atmosphere license number assigned to a facility by the director.

"Certification" means the complete service performed by the director, from inspection through the issuance of any applicable documentation of the results of the inspection.

"Controlled atmosphere storage" means any storage warehouse consisting of one or more rooms, or one or more rooms in any one facility in which atmospheric gases are controlled in their amount and in degrees of temperature for the purpose of controlling the condition and maturity of any fresh fruits or vegetables in order that, upon removal, they may be designated as having been exposed to controlled atmosphere.

**"Department"** means the Washington state department of agriculture (WSDA).

**"Director"** means the director of the department of agriculture or the director's designated representative. As used in this chapter, WSDA refers to the director unless the context states otherwise.

**"Operator"** means a person who runs, monitors, and records information for a WSDA licensed controlled atmosphere facility.

**"Person"** means an individual, firm, partnership, corporation, or association.

**"Room"** means any distinct separate storage area within a controlled atmosphere facility.

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-005, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-005, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-010 Controlled atmosphere designation.** Fruits and vegetables may be designated controlled atmosphere when they have been stored in a licensed CA storage and have met all the provisions of this chapter. In conjunction with certification by the director that all requirements have been met, all containers or subcontainers will be marked with the letters CA or similar designation, as well as a state lot identification number.

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-010, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-010, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-012 Identification of controlled atmosphere fruits and vegetables.** (1) The designation "CA" or words "controlled atmosphere" can only be used on containers or subcontainers of fruits or vegetables that comply with the requirements of this chapter.

(2) All containers or subcontainers intended for controlled atmosphere storage must be marked with either "WSDA" and "year of production" or a department supplied stamp.

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-012, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-012, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-014 Requirements for controlled atmosphere fruit and vegetables entering commercial trade.** (1) Controlled atmosphere (CA) fruits or vegetables must enter commercial trade channels within two weeks following CA certification.

(2) If CA fruits and vegetables are not shipped within two weeks after initial certification, they must obtain a new CA certification to qualify for an additional two-week shipping period.

(3) If identification of a previously certified lot can be maintained, a new state lot identification number is not required.

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-014, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-014, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-020 Controlled atmosphere licensing requirements.**

(1) Any person operating a controlled atmosphere storage must obtain a license from the department.

(2) To apply for an annual controlled atmosphere operator license, AGR form 6074 must be completed and submitted to the department.

(3) The application must be accompanied by a fee of five dollars per controlled atmosphere storage room, with a minimum fee of twenty-five dollars for five rooms or less.

(4) The initial license application must be completed before September 1st of any given year. Once issued, the license is valid for one year and must be renewed each year on or before August 31st.

(5) A license can be renewed after August 31st but such a renewal is considered "late." Late renewals are regulated by RCW 15.30.070, which requires payment for the original license fee plus a late renewal penalty of two dollars and fifty cents.

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-020, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-020, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-028 Controlled atmosphere facility operator requirements.** (1) Every licensed operator must submit to WSDA a signed, completed form containing the following information:

(a) Location of the storage facility;

(b) Storage room number;

(c) Date the room was closed and sealed; and

(d) Quantity of loose or packed fruit or vegetables in the room identified by variety.

(2) Every licensed operator must, at least once a day, record the following information on a form approved by the director:

(a) The percentage of carbon dioxide and oxygen inside the sealed storage room;

(b) The temperature inside the sealed storage room; and

(c) The time and date readings were recorded for both the air components and temperatures.

(3) The director has the authority to audit and report the results of the controlled atmosphere records.

(4) For auditing purposes, all licensed operators must notify WSDA before they open a controlled atmosphere storage room and before any controlled atmosphere storage fruit or vegetable is packed.

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-028, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-028, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-041 Controlled atmosphere requirements.** (1) The oxygen content of each storage room must be reduced to five percent within twenty calendar days after the room is sealed.

(2) Stored fruits or vegetables must be kept in controlled atmosphere storage under required degrees of temperature and percentage of air components for the specified period listed below:

<b>Apple Varieties</b>	<b>Minimum Storage Period</b>
Gala and Jonagold	Forty-five continuous calendar days
Other	Sixty continuous calendar days
<b>Pear Varieties</b>	<b>Minimum Storage Period</b>
Bartlett	Forty-five continuous calendar days
Other summer	Sixty continuous calendar days
Bosc	Forty-five continuous calendar days
Other winter	Sixty continuous calendar days

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-041, filed 5/6/15, effective 6/6/15.]

**WAC 16-450-042 Controlled atmosphere requirements for Bartlett pears.** Bartlett pears must comply with the requirements in chapter 15.30 RCW, this chapter and the following additional condition and maturity requirements:

(1) Be no further advanced in maturity than "mostly hard—some firm."

(2) Not exceed an average of two percent decay or breakdown.

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-042, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-042, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-044 Controlled atmosphere requirements for winter pears.** All winter pear varieties must comply with the requirements in chapter 15.30 RCW, this chapter and the following additional condition and maturity requirements:

(1) No more than two percent decay;

(2) No more than two percent scald; and

(3) A five percent maximum aggregate for all condition factors including cork.

(4) No more than five percent must be advanced in maturity beyond "firm."

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-044, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-044, filed 2/18/04, effective 3/20/04.]

**WAC 16-450-060 Controlled atmosphere requirements for apples.**

Apples must meet U.S. condition standards for export as stated in the United States standards of grades for apples, 7 C.F.R. Sections 51.300 - 321 (January 1, 2014).

[Statutory Authority: RCW 15.30.050 and chapter 34.05 RCW. WSR 15-10-091, § 16-450-060, filed 5/6/15, effective 6/6/15. Statutory Authority: Chapters 15.17 and 34.05 RCW. WSR 04-05-117, § 16-450-060, filed 2/18/04, effective 3/20/04.]