## **Cut Leafy Greens**

## **PUBLIC HEALTH REASONS:**

leafy greens were designated as TCS foods because they provide a medium that readily supports the growth of pathogens when they are held without temperature control after the internal fluid and nutrients are exposed by cutting the leaf. Cutting or shredding alters the physical properties (i.e. damages the waxy cuticle) and biochemical processes of the leaf and provides opportunities for microbial invasion of tissues. Contamination of leafy greens with pathogens can occur in the field, cooling facilities, packing houses, processors, transport vehicles or food establishments. Regardless of where or how contamination occurs, proper refrigeration the food in establishment will prevent the growth of pathogens that may be present on cut leafy greens.

FOOD CODE, OAR 603-25-0030, CHAPTER 1-201.10 (101) (b) In recent years there have been foodborne illness outbreaks and product recalls associated with cut leafy greens contaminated with pathogens (bacteria and/or viruses).

The Food Code has designated cut leafy greens as Time/Temperature Control for Safety (TCS) Foods that must be maintained at temperatures of 41°F (5°C) or less. "Cut leafy greens" means fresh leafy greens whose leaves have been cut, shredded, sliced, chopped, or torn.

Examples of leafy greens: all types of lettuce (iceberg, romaine, butter, leaf, and baby leaf), escarole, endive, spring mix, spinach, cabbage, kale, arugula, and chard.

This applies to commercially processed cut leafy greens, such as bagged salad mixes and spinach, and to leafy greens that have been cut in the food establishment. It does not include whole heads of lettuce or other raw agricultural commodities, and 'cut' does not include removing and discarding exterior leaves, which is a common practice for display in retail food establishments.

If fresh leafy greens are cut in the food establishment, the cut product must be date marked and discarded if not sold or served within 7 days. Commercially processed salad mixes in bags or containers must also be discarded after opening if not sold or served within 7 days.

To verify proper cold holding of cut leafy greens, measure the product temperature with a thin probe thermometer by inserting the tip in the thicker stem portion of the leaf. For sealed bags of product, insert a thermometer probe between bagged products or fold the bag tightly around the probe to ensure adequate contact with the product.

