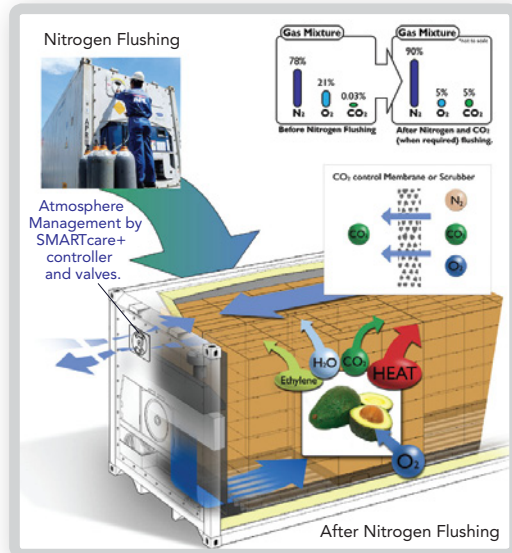


## SMARTcare<sup>+</sup> (Controlled Atmosphere)



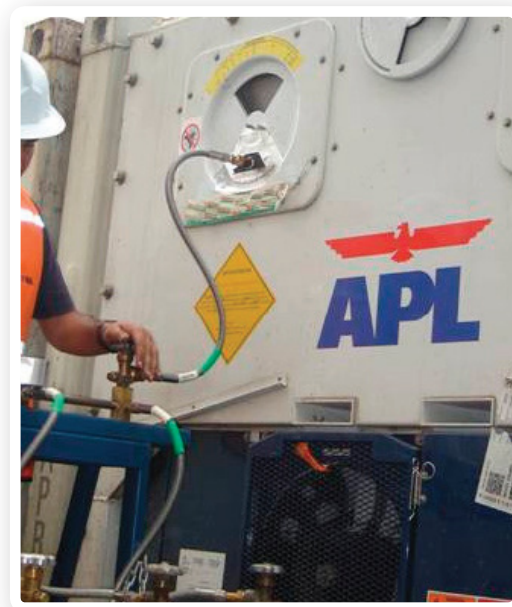
At APL, we know how to preserve the quality of fresh produce longer so that you can sell your products in new, more distant markets. With our leading-edge **SMARTcare<sup>+</sup>** technology and expertise, your perishables can enjoy much longer shelf-life and reach markets in prime condition.

### What is SMARTcare<sup>+</sup> and what are its benefits?




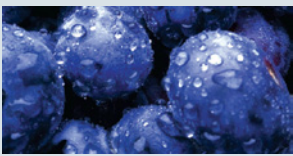


- Optimal atmosphere is achieved by gas flushing with food grade nitrogen
- **SMARTcare<sup>+</sup>** is the most effective method to prolong shelf-life and maintain quality of fresh produce
- Works by precisely controlling the atmospheric composition in a reefer container throughout transit, to slow down product respiration and ethylene production rates, therefore delaying the ripening or ageing process of perishables
- Suitable for long voyages, making ocean transport a viable alternative to airfreight
- Slows down the rate of deterioration of product quality
- Alleviates certain fruit physiological disorders such as chilling injury
- Inhibits bacterial growth and development of rots on fruit (eg: blueberries)
- Benefits fresh produce such as apples, asparagus, avocados, blueberries, cherries, mangoes and stone fruits (nectarines, peaches, plums)


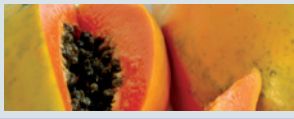

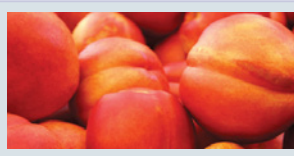

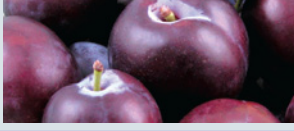
### Why is APL well placed to help you reap the benefits from SMARTcare<sup>+</sup>?

- We have a proven track record in using **SMARTcare<sup>+</sup>** to help customers break into new, more distant markets by manipulating the ripening rate of fresh produce. E.g. we were the first ocean carrier to ship asparagus from U.S. California to Japan
- Our global experience in applying **SMARTcare<sup>+</sup>** has benefited customers shipping products such as avocados, blueberries, mangoes, stonefruits, papayas, asparagus across the Europe, America and Asia continents, benefiting countries like Mexico, Chile, Peru, Japan, Hong Kong, Singapore and Canada, to name a few.
- We are actively involved in R&D and built the industry's first **SMARTcare<sup>+</sup>** test chamber to enable customers to conduct trials simulating the optimal atmospheric conditions for ocean transportation of different commodities
- Our reefer experts leave nothing to chance – from advising you on postharvest handling and packaging, conducting trials for your shipment to monitoring its movement every step of the way
- We have one of the largest and youngest fleets of reefer containers, with the most technologically advanced capabilities for precise temperature, relative humidity and atmosphere control



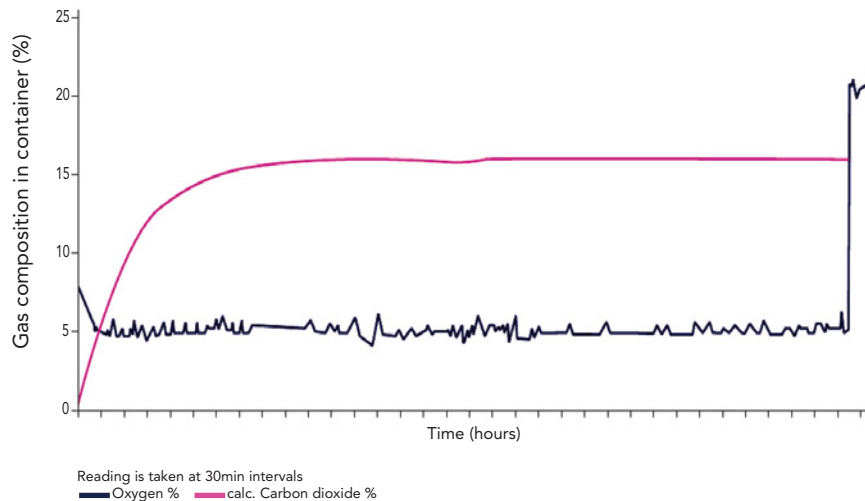
## Examples of longer product shelf-life with SMARTcare<sup>+</sup>

Commodity		Normal Shipment	SMARTcare <sup>+</sup> Shipment
Apples		2-6 months	6-12 months
Asparagus		1-3 weeks	2-4 weeks
Avocados		2-4 weeks	3-6 weeks
Blueberries		1-3 weeks	3-6 weeks
Broccoli		2-3 weeks	3-5 weeks
Cherries		2-3 weeks	3-4 weeks

Commodity		Normal Shipment	SMARTcare <sup>+</sup> Shipment
Grapes		1-3 weeks	1-7 weeks
Papayas		2-3 weeks	3-5 weeks
Mangoes		2-3 weeks	3-5 weeks
Nectarines		3-4 weeks	4-9 weeks
Peaches		3-4 weeks	4-8 weeks
Plums		4-6 weeks	6-9 weeks

Note: Shelf-life depends on the variety, cultivar, proper post-harvest handling and temperature management. The above figures are based on the best available information on the specific commodity.

Oxygen/Carbon Dioxide Composition in SMARTcare<sup>+</sup> Container  
(5% Oxygen / 15% Carbon Dioxide)



To find out how APL can help you move your business forward with SMARTcare<sup>+</sup> technology, please contact your local APL sales representative.