

Specifications of equipment for storage of fruit and berries in controlled atmosphere at Bioforsk

Description of the acquirement.

Bioforsk Ullensvang performs research in cultivation and storage of fruit. Equipment for storage of fruit and berries in different gas mixtures (O₂ and CO₂) will be purchased. The equipment must be appropriate for scientific studies of the impact of storage conditions on storability and quality of fruit and berries. The equipment must be flexible with regard to size of storage containers, control of gas mixtures, as well as monitoring of these and other relevant environmental conditions. The size of the storage containers are not specified. The offer may contain storage containers of different size.

The delivery shall include complete equipment fitted with guaranteed functionality in the laboratory at Bioforsk Ullensvang. The containers will be placed in existing cold rooms and the control system will be located in the adjacent control room. In addition training in the use of the equipment must be given. Equipment must provide stable deliveries over time while different control parameters can easily be changed.

Bioforsk wishes to highlight the fact that there is a budget limit on 600.000,- NOK on this project.

Specifications	Requirements	Yes/No	Note (reference to appendix)	Price (excl VAT)
24 storage chambers. Size suitable for research on storage of fruit in controlled atmosphere	Desirable			
Control system for supply of at least 4 different gas mixtures with defined O ₂ and CO ₂ content in at least 24 separate chambers. Automatic calibration, monitoring and recording of the atmosphere in each chamber in the area O ₂ : 0 - 25%, CO ₂ : 0 -20% (0.1% resolution)	Minimum			
Monitoring of ethylene in the storage atmosphere with portable measuring equipment. Detection limit <0.1 ppm, accuracy 2%	Desirable			
Nitrogen generator w/ buffer tank. ≤ 1% O ₂ in gas.	Minimum			

Appendix A
2013/778

Electricity supply 230V, 1 phase, 50Hz and electrical current 13A	Minimum			
Control and monitoring data available via internet or mobile phone	Desirable			
Options or elective options (Buyer is free to include or exclude these options)				
Service agreement	Desirable			
Additional information				
When service agreement is available, price should be quoted for 1 year and for additional years	Inform about			
Introduction to the customer's maintenance possibilities and duties	Minimum			
Guarantee, if different guarantee apply to different items, please specify	Minimum			
Time of delivery from ordering date	Minimum			
Information on service options	Minimum			
References to be given as per appendix C. Please state the three most relevant references during the last 5 years	Minimum			
Total price for the delivery (excluded optional elements)				
Total price of equipment				
*Compliance with demands must be documented.				