Atmosphere Generation System

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ANAEROGEN

Code: AN0025 & AN0035

Description
Where an AnaeroGen sachet is placed in a sealed jar, the atmospheric oxygen in the jar is rapidly absorbed with the simultaneous generation of carbon dioxide. This novel method differs from others commonly used in that the reaction proceeds with no evolution of hydrogen, and therefore, does not require a catalyst. Furthermore, water is not required to activate the reaction.
When used as directed, the AnaeroGen sachet will reduce the oxygen level in the jar to below 1% within 30 minutes. The resulting carbon dioxide level will be between 9% and 13%.
AnaeroGen was used in methodology for detecting bifidobacteria in meat and meat products in an investigation into the suitability of these organisms as indicators of faecal contamination.

Components
Each box contains:
10 AnaeroGen paper sachets which are individually foil packed.
1 Product Insert.
The active component within each AnaeroGen sachet is ascorbic acid.

Precautions
This product is for *in-vitro* use only.
As soon as the AnaeroGen paper sachet is exposed to the air, the reaction will start. It is therefore essential that the paper sachet is placed in the jar and the jar sealed within one minute.
The reaction of the ascorbic acid with oxygen is exothermic. However, the temperature of the AnaeroGen paper sachet will not exceed 65°C.

Storage
Store at 2-25°C. Under these conditions, the AnaeroGen sachets will retain their reactivity until the expiry date given on the outer box and on the foil sachet.

Directions
AN0035 is designed for use in 3.5 litre jars. It is also suitable for use in the Oxoid Anaerobic Jar HP0011 and for other jars of similar capacity.
AN0025 is designed for use in 2.5 litre jars such as the new Oxoid AnaeroJar AG0025 and other jars of similar capacity.
1 Place the inoculated media plates in the appropriate anaerobic jar. Disposable plastic Petri dishes should be of the vented variety to aid gas transfer between the interior and exterior of the plates.
2 Tear open an AnaeroGen foil sachet at the tear-nick indicated, and remove the AnaeroGen paper sachet from within.
3 Immediately place the AnaeroGen paper sachet in the appropriate clip on the plate carrier within the jar.
N.B. The AnaeroGen paper sachet will become warm to touch on exposure to air.
4 Close the jar lid immediately.
N.B. The time taken between opening the foil sachet and sealing the jar should not exceed 1 minute. Extended exposure will result in loss of reactivity, and full anaerobic conditions may not be achieved in the jar.
5 After the appropriate incubation period remove the plates and examine for the presence of anaerobes. If the plates require re-incubation then a fresh AnaeroGen sachet must be used following steps
2-5 described above.
6 After incubation, the exhausted AnaeroGen sachet should be discarded with the appropriate laboratory waste.

Control Testing
It is recommended that an OXOID Anaerobic Indicator (BR0055) is used in the jar as a visual check that anaerobic conditions have been achieved and maintained.
The user should check their Anaerobic system periodically for its ability to provide adequate conditions for the growth of appropriate bacteria.
The following strains are recommended:
Clostridium novyii ATCC® 9690 growth
Kocuria rhizophila ATCC® 9341 no growth

Disposal
On removal from the jar after incubation, the AnaeroGen paper sachet will retain a small amount of reactivity and will warm up. The sachets should be allowed to cool at room temperature prior to disposal alongside the appropriate laboratory waste.

Reference

1 Beerens H. (1998) *Int. J. Food Microbiol*. 40. 203-207.

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