

# Appearance of Easygel® Petri Dishes

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A major difference between pre-poured agar dishes and other ready-to-use media and the Easygel® pretreated dishes is that pre-poured agar dishes and other ready-to-use media are generally given a shelf life of 14 days with instructions for them to be refrigerated. Under those conditions, even if there is a contaminant present, it will normally not be detected and the media will be used before any contaminant is apparent. If the Easygel® pretreated dishes are stored in the same manner with the same shelf life, they would have no apparent contaminants either.

***If users of Easygel® pretreated dishes want the luxury of an indefinite shelf life at ambient temperature and variable storage conditions, there may be the occasional rare contaminant. If this is not acceptable, they should refrigerate (in a "frost-free" unit) the pretreated Easygel® dishes and use them within a 14 day period. (The pretreated dishes may also be frozen indefinitely, after which they will commonly assume a translucent, somewhat reticulated appearance when thawed. This appearance will have no adverse effects in performance and will disappear when the Easygel® medium is poured into them.)***

The petri dishes which are supplied with the Easygel® growth media contain a special pretreatment layer covering the dish bottom that contains calcium ions in a gel matrix. This layer is carefully applied and tempered for uniformity and under most circumstances is virtually clear and unnoticed to the eye.

However, if storage or shipping conditions subject the dishes to large variations in temperature and humidity, water may accumulate on the pretreatment layer so that fine to moderately sized droplets cover the layer surface. The droplets may be large enough to recognize or may be so fine that the layer appears to be covered with a fine haze-like film. In either case, the droplets do **NOT** indicate contamination and will **NOT** interfere with the clarity, solidification or effectiveness of the medium.

Also, occasionally, the pre-treated Easygel® dishes may be subjected to very dry conditions for a long time period and the layer may become so dry that a pattern of crystal formation appears on the surface, looking much like frost on a winter windowpane. This, too, will have **NO** adverse effect on the gelling of the medium and when the liquid medium is poured into the dish and swirled to cover the surface, the crystal formation will disappear and the medium will gel normally. Rarely, in the processes involving these changes due to conditions, the dish layer may develop an irregular pattern of wavy lines. These lines in the layer will have no effect on the gelling and proper results for the medium.

The adverse transit or storage conditions previously mentioned may result a small amount of condensate accumulation within the sleeve holding the pre-treated Easygel® dishes. This moisture does not constitute contamination and will not affect the sterility of the dishes in the sleeve.

**Actual contamination** in the pretreatment layer of dishes is rare due to stringent QC conditions, but it is impossible to achieve an absolute 100% defect-free product of this nature, just as it is with pre-poured agar dishes. Even if perfect conditions and protocol are present in the preparation of Easygel® pre-poured layer dishes or with commercially prepared pre-poured agar dishes, it is always possible that the dishes or sleeves holding the dishes or the packing of the empty dishes from the supplier may contain an occasional contaminant. Also in the sterilization and handling of the dishes and the medium that is dispensed into the dishes, there is a possibility for the stray contaminant to enter the process.

The true indication of a contaminant growing on a pretreatment layer is the presence of a circular spot (often dark colored) on the surface which does not disappear when the liquid medium is poured into the dish. When this type of contaminant is visible, it normally indicates that the dish has been stored for an extended period of time at ambient. It is virtually impossible to guarantee sterility with many types of microbiological media. However, contamination in/on the Easygel® pretreatment layer is usually quite obvious to the user and if any apparent contaminant is present, the dish should be discarded. The remaining dishes in that sleeve without contamination are good to use.

It should be noted that these conditions on the pre-treated Easygel® dishes are less troublesome than the appearance of excessive water in standard pre-poured petri dishes containing agar based medium. When pre-poured agar dishes are subjected to these adverse conditions, they often develop so much condensate that they are virtually unusable and often become contaminated due to the water leaking into the sleeves containing the dishes. Likewise, pre-poured petri dishes require refrigeration to prolong storage time and this is conducive to condensate formation due to the high water content of the gelled medium in the dishes.

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