GLASS DOSIMETERS EARLY WARNING SYSTEMS FOR ENVIRONMENTAL IMPACT



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GLASS CORROSION is often accelerated by environmental influences such as organic acids, temperature and relative humidity. The risk potential for corrosion depends on a variety of parameters. In contrast to conventional monitoring methods glass dosimeters respond to a wide range of environmental impacts and measure their integral influence over the entire exposure period.

WORKING PRINCIPLE

The dosimeters are made of tunably sensitive glass and already show the typical signs of corrosion at an early stage, such as leaching, formation of a gel layer, formation of a corrosion crust. The water content of the dosimeters before and after exposure is a measure of the environmental conditions. Analyses of the surface and the corrosion layer provide information for prevention.

APPLICATIONS

Dosimeters with different glass composition are available to monitoring various conditions, exposure times and locations, e.g. in

- Display cases
- Storage rooms
- Transport boxes or containers
- Outdoor areas in different climate zones
- Protective glazings for stained glass



