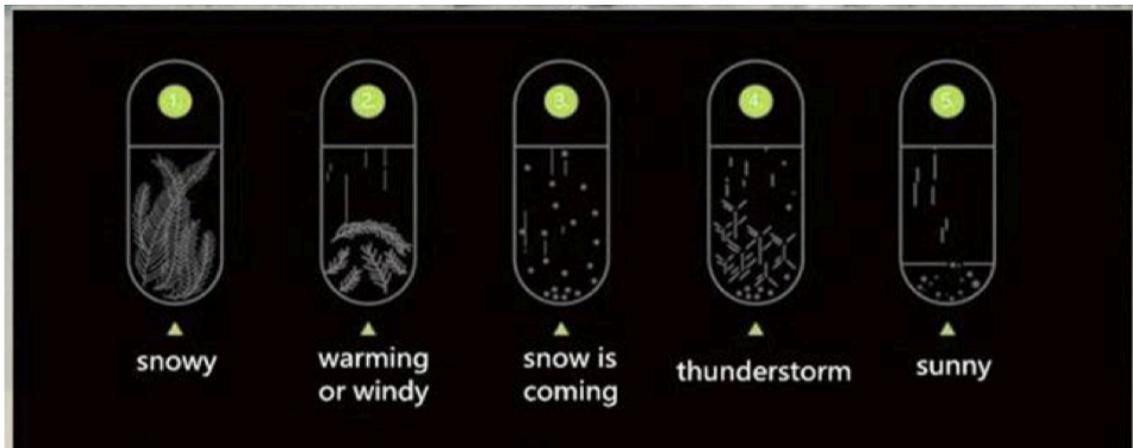


## Composición:

Agua destilada, alcohol etílico, nitrato potásico, cloruro de amonio y alcanfor.  
Los materiales se encuentran en el interior de un envase de cristal sellado y reaccionan en función de la temperatura y la presión atmosférica.

## Significado:

- Líquido claro y transparente: Tiempo despejado y soleado
- Líquido turbio: Tiempo nublado y posible precipitación
- Líquido con pequeños puntos: Niebla y humedad.
- Líquido turbio con pequeñas estrellas: Tormenta
- Líquido con pequeñas estrellas en días de invierno soleados: Nevada próxima
- Líquido con grandes copos dispersos: nubosidad en estaciones templadas y nieve en invierno.
- Líquido con cristales en el fondo: escarcha y heladas.
- Líquido con depósitos filiformes cerca de la superficie: viento.



Los cristales necesitan de 1 a 2 semanas para adaptarse al ambiente donde se encuentra. No colocar expuesto al sol o delante de un aparato de aire acondicionado

A storm glass is a type of weather forecasting device, composed of a sealed glass container, filled with liquid, that allows the user to forecast the weather by observing the appearance of the liquid in the glass.

The liquid within the glass is a mixture of several ingredients, most commonly distilled water, ethanol, potassium nitrate, and camphor. It was used on his voyage with Charles Darwin on HMS Beagle.

Admiral Fitzroy (1805-1865), as commander of HMS Beagle, participated in the Darwin Expedition from 1834-1836. In addition to his naval career, Fitzroy did pioneer work in the field of meteorology. The Beagle's instrumentation for the Darwin Expedition included several chronometers as well as barometers, which Fitzroy used for weather forecasting. The Darwin Expedition also was the first voyage under sailing orders that the Beaufort wind scale be used for wind observations. During the historic voyage, Fitzroy carefully documented how the storm glass would predict the weather:

- If the liquid in the glass is clear, the weather will be bright and clear.
- If the liquid is cloudy, the weather will be cloudy as well, perhaps with precipitation.
- If there are small dots in the liquid, humid or foggy weather can be expected.
- A cloudy glass with small stars indicates thunderstorms.
- If the liquid contains small stars on sunny winter days, then snow is coming.
- If there are large flakes throughout the liquid, it will be overcast in temperate seasons or snowy in the winter.
- If there are crystals at the bottom, this indicates frost.
- If there are threads near the top, it will be windy.

The premise of the functioning of the storm glass is that temperature and pressure affect solubility, sometimes resulting in clear liquid; other times causing precipitants to form. The functioning of this type of storm glass is not fully understood. In similar barometers, the liquid level, generally brightly colored, moves up or down a tube in response to atmospheric pressure. Certainly temperature affects solubility, but sealed glasses are not exposed to the pressure changes that would account for much of the observed behavior. Some people have proposed that surface interactions between the glass wall of the barometer and the liquid contents account for the crystals. Explanations sometimes include effects of electricity or quantum tunneling across the glass.

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# PROGNOSTICATOR, OR STORM GLASS;

## A NEW CURIOUS INSTRUMENT,

Formed of different Compositions, which will exactly shew the Weather; particularly high Wind, Storm, or Tempest. It will be preferable by Sea and Land, being portable,\* and will be found to be very exact and useful.

### *Rules to be observed.*

I.—If the weather is to be fine, the substance of the composition will remain entirely at the bottom, and the liquid will be very clear.

II.—Previous to changeable weather for rain, the substance will rise gradually, and the liquid will be very clear, with the appearance of a small star in motion.

III.—Before a storm or extraordinary high wind, the substance will be partly at the top, and will appear in form of a large loaf; and the liquid will be very heavy, and in a fermentation. This will give notice *twenty-four hours* before the weather changes.

IV.—In winter time, generally the substance will lie rather higher, particularly in snowy weather or white frost; the composition will be very white, with white spots in motion.

V.—In the summer time, the weather being very hot and fine, the substance will be quite low.

VI.—To know which quarter a wind or storm came from, you will observe the substance will lie close to the bottle on the opposite side to that quarter from which the storm came.

Observations have been made on the Storm Glass, and it has given much satisfaction both at sea and on shore, but like the Barometer it should be regularly watched at alternate periods.

### TESTIMONIALS.

Copy of a Letter from Vice-Admiral Sir ROBERT CALDER:—

“His Majesty’s ship Goliath was at anchor in Quiberon Bay, when a heavy gale of wind came on. The ship brought home her anchor; she let go a second, and a third, but had no effect, the ship still drifting and going ashore, seemingly without a probability of being saved. Captain Durham, in his Majesty’s ship Defence, was at the same anchorage, but unable to render the Goliath the smallest assistance; he having one of these curious instruments (or storm glass) on board, perceived it announced that the gale was going to abate, and in consequence made the signal thereof to Captain Brisbane, who was then preparing means to endeavour to save the lives of the Goliath’s crew. Within a quarter of an hour after the signal was made the storm did abate, and the Goliath rode in perfect safety.”

An experienced Commander of a free trader, during a voyage from Rio Janeiro to New South Wales, in January 1819, when in latitude  $46^{\circ} 28' S.$  and longitude  $29^{\circ} 19' E.$  says—“Hitherto I have omitted to make remarks on the Storm Glass, but it has indicated the weather being *bad* or *fine* very well. Yesterday it settled fast, and to-day is the finest by far we have experienced since leaving Rio Janeiro.”

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\* Storm Glasses are cylindrical, and are placed in round tin cases about 18 inches long by  $1\frac{1}{4}$  diameter