

Sulphur Dioxide is obtained from the burning of Sulphur, made into blocks with wicks for this purpose (Exhibit No. 1.21). It may also be obtained from liquid Sulphur Dioxide—for when this liquid is placed in an open vessel it rapidly volatilises into the gaseous state. This latter method is by far the better of the two, because it not only involves less trouble, but it also avoids the risk of fire, which is always present when the first method is employed. The strength in which the sulphur is used is 1 lb. of Sulphur, or 1 pint of the liquid gas, for every thousand cubic feet of space in the room. The disinfecting action is due to the combination of Sulphur Dioxide gas with moisture forming Sulphurous Acid.

A reference has already been made to the use of Steam Sterilizers.

Besides the actual manipulation of the machines, details of which are given in subsequent pages, it is essential to understand fully various physical facts relating to the action of steam in its different forms.

Steam may be either Current or Confined, that is to say, it may be allowed to flow freely from the boiling water through the disinfection chamber quite devoid of any added pressure, this is termed Current Steam,—or it may be Confined in the chamber under pressure.

Under ordinary atmospheric pressure, water boils at 100° Cent., and the steam arising from that water will also be at 100° Cent.

The boiling point of water may be raised either by adding some mineral salt, thereby increasing the Specific Gravity, or by applying pressure.

Calcium Chloride is the salt most commonly used, a 2% solution possesses a boiling point of about 105° Cent., but obviously a limit to this method of raising the boiling point is soon reached; the application of pressure is much more preferable in practice, on account of the ease with which varying ranges of temperature can be obtained.

Under 5 lbs. pressure water boils at 109° Cent.

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