

Hydrosulfuric in Black Sea

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The concentration of H₂S changes from 0.5mg/L to 10mg.L in the depth of black sea from 180 meter to 2000 meters down. The main source of H₂S is chemical and bacteriological reduction of sulfates or sulfatereduction. Because the speed of oxidation reaction of H₂S is more faster than the speed of sulfatereduction,that's why the concentration of H₂S never beyonds the barrier of oxygen and so the explosion of H₂S is impossible.

The forms H₂S was calculated according to pH in Black Sea. As the calculation shows the main form of H₂S is HS⁻ form(90%),which theoretically excludes the explosion of H₂S

(table1)

pH	[H ₂ S]%	[HS ⁻]%	[S ²⁻]%
4	99,94	0,06	0,00
5	99,40	0,60	0,00
6	94,33	5,65	0,00
7	62,50	37,5	0,00
8	14,28	85,71	0,01
9	1,63	98,36	0,01
10	1,63	16,63	81,74

So 5-10% of the summary quantity of Hydrosulfuric can be in the form of H₂S form.in Black Sea.