

Lime-Sulphur--Its Use as a Fungicide and an Insecticide

By Prof. P. J. O'Gara, Pathologist. Written especially for the Medford Mail Tribune. (Copyright, 1911, by Medford Printing Company.)

(Fourth installment.)
By inspecting the table of calcium sulphides, it will be seen that column three, giving the chemical formula, indicates the relative amounts of sulphur combining with calcium in the various sulphides.

The sulphur which has been set free in the last reaction would combine with more lime on further boiling and form polysulphide (CaS5) and thio-sulphate (CaS2O3.) However, if the boiling be continued, it will be seen that more thio-sulphate would be formed at the expense of the penta-sulphide. This is very significant and would mean that a mixture of lime and sulphur may be boiled too long, thus defeating the very end which it was attempted to attain.

It is well known that thio-sulphates in solution change slowly to sulphites, which, in turn, change to sulphates according to the following reactions:
(4) CaS2O3 equals CaSO3 plus S.
(5) CaSO3 plus O equals CaSO4.

That is to say, the thio-sulphate in changing to sulphite gives up one atom of oxygen. To one interested in changing to sulphate takes up one atom of oxygen. To one interested in a further study of this interesting matter, I would say that these five reactions may be found in any good text book on chemistry.

In the reactions which have been given it has been pre-supposed that the lime and sulphur are pure. In practice this is not always the case, since commercial lime frequently contains considerable amounts of magnesium oxide. It is quite well known that magnesium does not readily form compounds with sulphur like those formed by calcium and cannot take the place of calcium. Magnesium oxide when boiled with water and sulphur acts in an undesirable way, since it causes a waste of sulphur during the boiling of the mixture.

This is due to the fact that when magnesium hydrate is boiled with water and sulphur it forms what is known as magnesium sulphhydrate (MgS2H2). This compound decomposes very readily and produces the well-known, ill-smelling gas, hydrogen sulphide (H2S). It is also known by the name of hydro-sulphuric acid, or sulphuretted hydrogen, which is quite familiar on account of its characteristic odor. In the preparation of lime-sulphur with commercial lime, containing considerable amounts of magnesium oxide (MgO), it has been shown that hydrogen sulphide is given off and that a charge of the operation have been made ill by inhaling the gas. Since the gas contains sulphur, all of the sulphur which has entered into it is lost by passing off from the solution during the act of boiling.

Hydrogen sulphide is a poisonous gas and should not be inhaled. This fact could indicate that lime of a good quality should be used and should contain at least 95 per cent calcium oxide. The sulphur may be either the four of sulphur or the flowers of sulphur, and at least 99 1/2 per cent pure. Before making up a home-sold lime-sulphur wash, it is therefore a very good plan to get a lime, as well as a sulphur, whose quality will be guaranteed.

(2) 3Ca(OH)2 plus 8S equals CaS2O3 plus 2CaS3 plus 3H2O.
(3) CaS5 plus 3O equals CaS2O3 plus 3S.

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Hunters Out After Lion.
SAN BERNARDINO, Cal., Feb. 16.—Hunters led by Mike Grogan, tracker at the Palter ranch near Squirrel creek, and forest rangers have started after a gigantic mountain lion which yesterday chased Grogan. He nearly reached his barn in time to save himself. For several hours he was held prisoner. Every time he moved the lion plunged heavily against the door. Finally a forest ranger passed on horseback and frightened the animal away.

IN THE CIRCUIT COURT OF THE STATE OF OREGON FOR THE COUNTY OF JACKSON.
In the matter of the application of R. J. Conroy and R. W. Clancy to register title to the following described premises, situated in the county of Jackson, state of Oregon, to-wit:
The Conroy-Clancy subdivision to the city of Medford.

TAKE NOTICE
That on the 16th day of February, A. D. 1911, an application was filed by the said R. J. Conroy and R. W. Clancy in the above entitled court for initial registration of the title of the land above described.
Now unless you appear on or before the 23rd day of March, 1911, and show cause why said application shall not be granted, the same will be taken as confessed and a decree will be entered according to the prayer of the applicant and you will be forever barred from disputing the same.
W. R. COLEMAN,
Clerk of the Circuit Court of the County of Jackson and State of Oregon.

NEFF & MEALEY,
Attorneys for Applicants.
Haskins for health.

ILLINOIS' SONS GATHER SOON

March 3 is set as date for box social—Every Person Coming From Sucker State is Urged to Be Present.

The Sons and Daughters of Illinois will hold a box social and reunion March 3 in the Knights of Pythias hall. All persons hailing from this state are urged to attend. Committees in charge of the evening are:
Reception—Mrs. J. A. Westerlund, chairman; Mrs. McBride, Mrs. Brown, Mrs. Waterman, Mrs. Mundy and Mrs. John Perl.
Invitation—Dr. C. R. Ray, M. E. Worrell and Mrs. Mundy.
Music—U. S. Collins, Mrs. W. M. Van Scoyoc, Mrs. Gore and Mrs. Perl.

Society Girl Arrested.

PORTLAND, Ore., Feb. 16.—When the police called Miss Irene Albee, daughter of State Senator Albee on the telephone today and told her that a warrant was out for her arrest on the charge of speeding her automobile, the young woman laughed heartily, believing it a joke perpetrated by some of her smart society friends.

The joke became a grim reality when a detective arrived at her home and served the warrant. She will be tried in municipal court tomorrow. Miss Albee is the first woman to be arrested in Portland for fast driving.

Bank Cashier Jailed.

SEATTLE, Wash., Feb. 16.—B. Bosco, former cashier of the Bressi bank, of Seattle, is in jail today along with his partner, V. E. Carniey. Both are charged with grand larceny. The two men have been conducting a brokerage business since they quit the bank after financial difficulties some months ago. They are accused by Cegario Caragio, a laborer, of stealing \$200 the man gave them to forward to a bank at Philadelphia.

Wine Industry Tied Up.

PARIS, Feb. 16.—The wine industry in the Champagne district is completely tied up today, pending the vote on a bill to prevent dealers from buying wine from other sections of France, champagneizing it and selling it as the real stuff.

Tuna Season Opens.

LOS ANGELES, Cal., Feb. 16.—The Tuna season is open. This is the news that was flashed in from Catalina island today, when a huge school of the prize game fish was sighted there. The tuna are unusually close in shore for this time of the season, their usual haunts being off Seal islands.

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J. T. BROADLEY & CO.
Corner 6th and Central; Greenhouse near city reservoir. P. O. box 521. Phones Store 1451 Main, Greenhouse 5181 Main.

ARMY OF 'BOES HEADED THIS WAY

Over 200 Members of I. W. W. Leave Portland on Freight Trains Bound for Fresno Where Fight is On—Local Police Ready.

PORTLAND, Ore., Feb. 16.—Intent on joining the fight against the citizens of Fresno, 200 members of the Industrial Workers of the World left Portland today aboard freight trains for California.

The Industrialists reached Portland last night from Spokane and various other cities of the Pacific northwest.

The local police department has been advised of the expected advent of this army and will be ready to keep them on their way to Fresno.

No Clue to Robber.

PORTLAND, Ore., Feb. 16.—Having only a vague description of the robber and the jewelry he got and without clues, Detectives admit that there is small chance of capturing the man who walked into the Diamond Palace Jewelry Store on Washington street, slugged James Gilbert, the clerk, looted the safe of several hundred dollars in cash and over \$3,000 worth of diamonds and escaped while hundreds of persons passed the store.

The police of all Pacific Coast cities have been notified to be on the look out for the robber, as it is believed he left town some time yesterday.

Haskins for Health.

Haskins for health.

For Sale

15 acres, 3 miles from Talent, fenced, timber, alfalfa and fruit land, good house, pure water, 1/4 mile from school, 300 young pear trees, lovely place; \$2000, one-half down.
This 15 acres is one of the loveliest small ranches in southern Oregon. Sheltered by the hills from the cold winds of winter, deep, fertile soil, an ideal place for health.
\$134 Acre.
Also 34 acres, 1 mile from Talent, 12 acres of fruit, family orchard in bearing; apples, Newtowns, 12 acres, peach filled; 7 acres timber, irrigated, dwelling house shaded by large laurel trees, plenty of water; fertile soil; garden spot; pumping plant; terms, \$13,000, \$7000 cash, the balance in payments of \$1000 yearly at 6 per cent.

\$388 Acre.
Also 20 acres alfalfa and fruit land, with timber, 1 mile from Talent; \$6500 cash down; just think what a snap, a little over \$300 an acre. Where can you find near the depot and railroad a cheaper place?
\$325 Acre.
Town lots in the newly incorporated town of Talent, Ore., on the installment plan.
From \$150 to \$500 a Lot.
A fine four acre ranch near Talent; very fertile alfalfa and fruit soil. Well watered, all fenced and cultivated; Peach orchard, young, of 160 trees bore last year. Apple trees 36, Apricot 1, cherry 2, English Walnuts 2, Nectarine 1.
Tokay and Malaga grapes 3 year old. Strawberries 1-2 acre Raspberries and Logans for family use. chicken ranch, chicken house, new woodshed.
Wagon shed, etc., good house, spring, water piped to house, creek runs through the place. Only \$1500 cash down.

Also 17 acres, 14 acres commercial fruit bearing orchard, 2 miles from Talent; \$10,000, one-half on time.
\$580 Acre.
Also 80 acres fine timber, \$2000, one-half down.
\$25 Acre.
A fine fertile Fruit Farm, all under cultivation; fenced; new five-room house, bath room, etc.; out-buildings, barn, etc.; level; one and one-half miles from Talent, Oregon; good well of water; young orchard of apples, mostly Newtowns and Spitz; twelve and one-half acres in peaches; two acres in peaches, etc. From young, from 1 to 3 years. Price \$8,750, one-half cash, balance to suit purchaser.
36 acres—\$243 acre.
Forty acres; about 3 miles from Talent and Phoenix, Ore.; fruit land; 2 good springs, 5-room house, out-buildings, small fruit, 5 acres cleared; good poultry ranch, over 1000 of standing timber; \$1200 down, balance on time to suit the buyer; only \$50 an acre. Look all over the country and see if you can find a place so cheap.
Also 29 acres, orchard and alfalfa land; 2-4 miles south of Talent, Ore.; 1200 young fruit trees, apples, peaches and pears; one acre in bearing; house, barn and out-buildings; all fenced, most of it being Page wire fence, 19-strand, rabbit tight; sub-irrigated and tiled; \$2255 acres; over half down, the rest on time at 7 per cent.
Also lands, alfalfa and fruit, from 20 to 800 acres. Write, enclosing stamps, or come and see me.

L. N. Judd
Talent, Oregon

NOTICE!

We want every man in Medford to know about these, consequently we are using a little more space this time.
No. 1—An acre of ground, with two good houses on it. One a six-room and the other a four-room.
An ideal place for gardening and chicken raising. In fact for a suburban home it can't be beat.
This spring you will have the advantage of a paved street without a cent of cost to you.
On the property there is a good well, so that you can irrigate every foot of the ground.
All the advantages of the city folks, without the necessary expense, is just what this place means.
\$1250 will handle, and the balance will be less than the first payment.
No. 2—A six-room, thoroughly modern house, on West Tenth street.
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The price is \$3650, on mighty attractive terms.
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References: First National Bank, Grants Pass Banking & Trust Co.

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Medford Mail Tribune
Official Map of
Jackson County, Ore.
Compiled especially for the Mail Tribune by the Jackson County Abstract Co. Approved and officially adopted by the county court, July, 1910.
Shows ownership of each parcel of property, township and section lines, county roads, forest reserves, railroad grant, city and town boundaries and all other necessary information.
The only convenient, handy, complete map of Jackson county published in many years. Size 29 by 40 inches, on heavy map paper, tinted at both ends.
No home complete without this map. It sells for \$2.50, but will be given away free to subscribers to the Medford Mail Tribune.
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