

SPECTROSCOPE TO AID ZINC INDUSTRY

Dr. Chas. Nitchie Explains How New Instrument Discovers Metal's Impurities

VISITING CHEMIST TELLS OF ADVANTAGES IN RAYS

Extremely pure zinc containing less than one part of impurities per million is practically tarnish-proof and resists atmospheric corrosion, almost as well as gold, according to Dr. Charles Nitchie of the New Jersey Zinc company, speaking before the Institute of Chemistry of the American Chemical Society Wednesday morning.

"Application of the spectroscopic instrument for making and measuring artificial rainbows, to the study of zinc has revealed unsuspected impurities in infinitesimal amounts and has enabled chemists to prepare the metal in a state of purity hitherto unattainable," Doctor Nitchie explained.

Discerns Impurities "The spectroscopic analysis has been used for finding out what kinds of impurities are present in various materials but recent refinements in its use tell us not only the kinds but also the quantities of infinitesimal impurities present," he continued. "The infinitely minute amount of copper picked up by a specimen of zinc from the air in the neighborhood of running electric motors can be determined with great accuracy by the spectroscopic method."

"Analyses requiring days for the completion by ordinary chemical methods of equal accuracy can be carried out by the spectroscopic method in a matter of minutes or at most an hour or so. Spectroscopic analysis requires samples much smaller than those used for chemical analysis and this makes a considerable saving where materials are to be handled. Many large industries such as the Westinghouse Electric and Manufacturing company, The American Brass company, The General Electric company and others are realizing considerable savings by using spectroscopic methods in testing materials."

The spectrum produced and measured in a spectroscopic is of the same nature as a rainbow but extends far beyond the range of light visible to the human eye. When materials are heated to the point of boiling in an electric arc, each chemical element gives out light of certain wave length or colors and the spectroscopic analysis—this light and measures its wave length. The wave lengths of the light thus emitted and measured are quite as characteristic of the elements as are Bertillon measurements of men. Thus one may speak of the spectroscopic as an instrument for "finger printing" the elements."

Penn State Agents Accompany Radio Flower Club on Tour

Thirty members of Uncle Wip's Radio Flower Club in Philadelphia recently took a tour to three of the most beautiful gardens in the city. They were accompanied by County Agent C. K. Hallowell, Extension Landscape Specialist Emil Kant of the Pennsylvania State College, and Uncle Wip.

The boys and girls who went on the trip ranged in age from six to fourteen years. Up to the time of the trip the three men mentioned, who have charge of this unique piece of club work, had no contact with the young folks except over the radio. On the day following the trip a list of nine questions concerning what was seen on the tour was prepared and sent to each of the participating club members. The answers are to be returned to Uncle Wip, who is giving prizes for the best replies.

Players Offer Popular Connors Play Tuesday

(Continued from first page) understanding and sympathy. However, not even Tony can understand her, entirely.

C. J. O'Donnell, who has played in innumerable roles in his four years at Penn State, is playing the part of "Pop" Harrington, Patsy's best friend. His consistently excellent performance in the past are maintained in this comedy. Miss Edith Hartman, who has recently completed four years of playing in Juniata college dramas, will be "Mom" Harrington. Miss Irma Gast plays Sadie Bachman, "who doesn't want to be a nuisance." Miss Gast will be remembered for her good work in "Her Husband's Wife" given here last summer.

Walter Druckenbrod, the Dominic of "The Dover Road" is playing O'Flaherty Patsy's older sister, Grace Hamilton, and Billy Caldwell, her fiancé, are played by Miss Margaret Schmoker and Robert Cieslak. Both experienced in dramatic work Ben Ricker, the Mr. Latimer of "The Dover Road" will play Tony Anderson. Patricia Harrington, "The Patsy" is very well done by Miss Mary Hornell. It will be her first appearance on the Auditorium stage, and cheers and applause indicate that her debut here will be a successful one.

Chemists Stress Value Of Research Workings

(Continued from first page) carry the resulting benefits to their respective corporations. Representatives of the New Jersey Zinc company are interested because the size of the pigment particle determines the character of paint.

Because such matters as glue, nitro-cellulose, soap solutions and many others, including milks, contain hampering particles that cannot be seen or detected by methods other than those sensitive and special. Dr. Kjaerner and Victor Kofman of Wisconsin University and the DuPont company respectively, have an interest in the particle size discussion.

Mayo Brothers Represented Representing the Mayo Foundation, of Minnesota, E. C. Kendall, will lecture Tuesday on the oxidation-reduction in the living cell. This subject, one of the hardest to handle in a lecture, should also attract many medical scholars and outsiders who will have interests in the talk. The remainder of the week will be spent in discussing the progress and problems in the chemistry of nutrition.

Pennsylvania Leads in Producing Ice Cream

"Ice Cream Manufacture," a new circular just issued by the Pennsylvania State College agricultural extension service, declares that Pennsylvania is the leading state in the Union in the production of ice cream. According to the figures given, the Keystone state produced 34,100,000 gallons of ice cream in a year. Figuring a gallon of ice cream to weigh four and a half pounds and to test ten per cent fat, the ice cream produced in Pennsylvania in 1923 utilized the equivalent of nearly 400,000,000 pounds of milk to supply just the fat in the ice cream, or more than eleven percent of the milk produced in the state.

SUMMER EXCURSION SCENE



Picnic Along The Way

"Dry Ice" Explained By Chemists Here

Ice cream packed in a cardboard box with a "special" kind of ice can be shipped several thousand miles and the frozen dairy will be harder at the end of the trip than when it started, and the box will be perfectly dry, according to disclosures at a special demonstration of "dry ice" Monday afternoon at the Institute of Chemistry.

Refrigerator cars on railroads that depend upon water ice for cold must be stopped every other day or so and reloaded with upwards of five tons of ice, but it takes only one ton of the "new" ice to keep such a car cold for the best part of a week.

By capturing and compressing an industrial waste product, carbon dioxide gas, familiar to all as the gas that makes bubbles in soda fountain drinks, chemists have been able to produce commercially this "dry ice" that formerly they made up in small quantities in their laboratories mostly for the fun of showing it. Dry ice is desert sands and 146 degrees colder than ordinary ice, it is now made and used by the ton. It evaporates, giving off its cooling qualities, but does not melt as does ordinary water ice.

Series of Three Tours To End Excursion Trips

(Continued from first page) Mountain into Kishacoquillas valley. Leaving Kishacoquillas valley the route will lead along the Juniata river through Huntingdon, Alexandria, Water Street and Spruce Creek. The gaps cut through the mountains by the Juniata river are well worth seeing and have been described by one writer as "wild, grand and beautiful." On the way home a stop will be made at the Ice Caves. In this place there are no real caves,

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The Playgoer

It is a common belief in this season of the year that good books should not be published in the summer, because in the hot days people do not have the patience to read good books, but prefer poems by Martha Dickinson Bianchi and Grace Hazard Conkling. Besides, all the reviewers are out of town anyway. The idea has company in the theatre. It is believed by the actors and sworn to by the producers that in July and August the taste of the public runs not only to ice cream and gingerbread but to pines and strawberries and plays by A. A. Milne. Current phenomena justify the opinion; yet strangely enough Van Wyck Brooks' "Emerald and Others" and John Driskine's "Prohibition and Christianity" were born into the United States in the light of a summer's day, and hardly a fortnight ago O'Neill's "The Great God Brown" made a mystifying appearance on the London stage.

However, these examples are the exceptions rather than the rule. Comedy in its place is all right and Director A. C. Cloetingh, the Players, and the general public have proved that State College is its place. One recalls somewhat dimly the Medea of Euripides. That too, had a place, and one remembers that the Auditorium was somehow jammed. But that was in the winter. In any other case, apparently, he is out of place in the Auditorium as a season coat would be in August. In the summer it is only fiddlesticks that count, and say what you will, at this sort of thing the Players are expert, perhaps from long experience.

Yes, we are ready to concede especially after Friday's performance of "The Dover Road" by the Players, that Professor Cloetingh has done much for amateur dramas not only in this college but in colleges all over the state. Distinctly Professor Cloetingh is a man of the theatre. He knows the superior advantage of such plays as "Kempy," "The First Year," "Metron of the Movies," "The Seven Keys to Baldpate," "The Witches

How" and "The Dover Road"—when the success of the Players is considered. The plays he chooses are monotonously plays after the own heart of the preposterous Clayton Hamilton; they are selected not with a sense of their literary beauty but with an eye to the box office, an unusually keen eye, to be fair to the director. Presumably, this is what is known as placing amateur dramas on a high plane. It is good drama. Good business. And yet, knowing Professor Cloetingh's devotion to the high places of the drama, there is, one feels, coupled with his financial acumen, a lingering, a bitter regret. Yet in all justice to Professor Cloetingh he has accomplished more than the mere production of flimsy entertainment, he has done more than the manufacture of booming dramatic institutions. Professor Cloetingh has developed excellent actors. He has made Ben Ricker, Mabel Reed, N. D. Zimmerman, Dorothy Musser. This in spite of the plays he chooses. How much more could be accomplished by producing plays written by Penn State students themselves!

"The Dover Road" Friday cleared up several things to people interested in the Players it showed exactly how far the performers could travel on their chosen path in drama, to people genuinely concerned in literature it showed that A. A. Milne is at bottom a glorified P. G. Wodehouse, albeit, skilful in the tricks of his trade, and knowing just what the general public wants. The sort of man who would write "Winnie the Pooh." And sell it for two dollars. That Milne is hardly more than an engaging showman was obvious Friday night. All the craft of the stage

he called into play. The staff of four, absolutely of no purpose to the theme of the comedy. The eccentricities of Mr. Latimer, an excuse to get away with laughs otherwise not forthcoming. The endless repetition. All these paid heed ceaselessly through the work. On the whole a shallow farce built for laughs. Just the sort of thing for an amateur dramatic club. Eccentricity when employed on the stage reveals a lot and covers more. And it gets the actors into hot water. Ben Ricker, as the peculiar Mr. Latimer, is open to criticism through no fault of his own. The dramatist, himself, has laid the pitfalls, and in a foreword to the play confesses it. In the first act Latimer is a preacher, in the second a showman; in the third a lover. Ricker played the parts as they were written in this he was conscientious itself. To many this consistency looked like exaggeration on Ricker's part, it seemed as if he overdid the role, that he was at once too paternal, too enthusiastic, too romantic. Yet, as I have said, Ricker was doing exactly what he set out (Continued on last page)

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