of the substance. No attempt has been made to determine the exact chemical composition of the product after being deposited on the leaves and fruit.

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A COMPARISON OF THE VISCOSITY AND LIQUEFACTION OF VARIOUS GELATINS

A STUDY of a few brands of gelatin in their relation to the ability of bacteria to liquefy them was undertaken to determine the suitability of the gelatin on the market for use in bacteriological work.

The gelatin media employed consisted of

Peptone (Difco)	0.1 gram
Gelatin	various amounts
Water (distilled)	100 cc.

This was heated at 60 to 65 degrees C. till dissolved, the reaction adjusted to pH 7.4 and sterilized at fifteen pounds for fifteen minutes.

The viscosity of three of these gelatins as shown by the Ostwald viscosimeter was as follows:

Gelatin 2 per cent.	Viscosity (36° C.) Referred to water
No. 1	1.66
No. 2	1.396
No. 3	1.475

Gelatin 10 per cent. in culture tubes was inoculated with one tenth cc of a broth culture of Serratia marcescens and incubated at 20 degrees C. The depth of the liquefaction was measured each day.

	Days					
Gel no.	1	2	3	4	5	6
	Centimeters					
1	.5	1.	1.2	1.5	1.8	2.4
2	1.	2.4	3.2	4.6	complete liquefaction	
3	.6	.9	1.6	2.2	2.8	3.

The liquefaction of gelatin No. 2 would be rated as rapid, while that of No. 1 would be comparatively slow. This No. 2 gelatin was not less than eighteen years old at the time of the experiment. The Digestive Ferments Company gives the information that the present-day gelatins have considerably more gelation power than those of twenty years ago. The liquefaction of gelatin by bacteria observed twenty years or more ago should be deduced on this basis.

It is generally understood that the age of the gelatin culture medium is a factor in the liquefaction time; that is, a gelatinolytic organism may bring about liquefaction quite rapidly when inoculated into freshly prepared gelatin, and much more slowly if introduced into the same medium sometime later. This is based on the observation that the viscosity of gelatin increases with age.

That the viscosity increase due to age does not affect the liquefaction rate is shown below.

Gelatin culture medium inoculated with one tenth cc of a broth culture of Proteus vulgaris. Incubated at 20 C.

	Gelatin one day old			Gelatin twenty days old		
	15 per cent.	10 per cent.	5 per cent.	15 per cent.	10 per cent.	5 per cent.
24 hrs.	2 mm	2 mm	5 mm	2 mm	2 mm	5 mm
48 hrs.	4 mm	5 mm	15 mm	4 mm	5 mm	15 mm
72 hrs.	6 mm	8 mm	20 mm	6 mm	8 mm	20 mm

FREDERICK W. SHAW

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THE OKLAHOMA ACADEMY OF SCIENCE

THE fifteenth annual meeting of the Oklahoma Academy of Science was held in Stillwater with the Oklahoma A. and M. College, November 26 and 27. This meeting was held under the presidency of J. H. Cloud, professor of physics, O. A. M. C.

One hundred and eleven papers were presented. These included 54 papers in the section of biology, 21 geological papers, 16 papers in physical science and 17 in social science. Three general addresses were also given.

The Oklahoma division of the American Chemical Society met in conjunction with section C, the section of physical sciences.

Officers for the year 1927 were chosen as follows:

President, Charles N. Gould, of Oklahoma Geological Survey.

Assistant Secretary-Treasurer, Herbert Patterson, O. A. M. C.

Vice President, Section A, L. B. Nice, University of Oklahoma.

Assistant Vice President, Section A, Robert Stratton, O. A. M. C.

Vice President, Section B, A. H. Koschmann, O. A. M. C.

Vice President, Section C., F. E. Knowles, Phillips University.

Vice President, Section D, J. Dowd, University of Oklahoma.

The membership at the time of the meeting was 173, of whom 62 are also members of the American Association for the Advancement of Science. At this meeting 95 new members were elected.

The activities of the academy are expanding very rapidly and its influence is of increasing importance.

A. RICHARDS,
Secretary-Treasurer.