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SOURCE Referativnyy Zhurnal, Khimiya

REVIEW OF "REFERATIVNYI ZHURNAL, KIMIYA"

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The preliminary report [ ] on the new Soviet Abstract journal, Referativnyy Zhurnal, Khimiya (hereinafter abbreviated RZh Khim), describes the format, composition features, and some other characteristics of the periodical. This report surveys the first eight consecutive issues of the periodical and attempts to answer such questions as how effective a vehicle it is for keeping the Soviet scientist abreast of Western developments, and whether or not it will decrease Soviet dependence on Western abstract journals. In evaluating RZh Khim certain comparisons are made with Chemical Abstracts of the American Chemical Society. Analytical and statistical data have been assembled in three tables and a graph (Tables 1, 2, 3; Figure 1). Table 1 shows how the references (abstracts, book reviews, dissertations, patent descriptions, etc.) in RZh Khim have been distributed quantitatively by subject. Each number represents the percent of total references for a particular subject in the issue. Thus, in issue No 1, 1953, (which consisted of 1,297 references) 37.8 percent of the total was devoted to the subject of chemical technology.

Table 2 is analogous to Table 1 and lists the corresponding information for Chemical Abstracts. Table 3 lists the actual number of references to work done in orbit countries, by country. The total number of references to work done in non-orbit countries is given in the last column for comparison.

RZh Khim itself does not appear to be too effective a means of keeping the Soviet scientist abreast of scientific developments in the West. Examination of the periodical reveals that although all of the major scientific journals are covered, they are not covered as extensively as they are in Chemical Abstracts. RZh Khim contains about 2,000 references per issue. Chemical Abstracts has 3,000-5,000 and Chemical Abstracts covers 5,236 periodicals. It is still not known how many or what periodicals are covered in RZh Khim, although in issue No 1 it was stated that a list will be included in one of the early 1954 issues. Chemical Abstracts has a larger list of abstractors than RZh Khim. Table 3 indicates that about 75 percent of the abstracts in each issue are of non-orbit origin.

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Since the major abstract journals of the West (Chemical Abstracts, Chemisches Zentralblatt) are so much more comprehensive than RZh Khim, it is not likely that the availability of the latter will decrease dependence on them to any great extent. It is true that RZh Khim has a more complete coverage of Orbit literature than the western abstract journals, but in an over-all sense, the Soviet scientist must still resort to the western abstract journals for a complete and up-to-date coverage of the world's scientific progress. Moreover, any scientist would prefer not to restrict himself to just one abstract journal, as the very nature of abstracting is such that no two abstractors would write identical abstracts on the same material.

In evaluating the relative importance of RZh Khim and foreign abstract journals to USSR scientists, one must also take into consideration the fact that RZh Khim at this stage is not the only available source of information in the Russian language on work done abroad: Khimiya i Khimicheskaya Tekhnologiya publishes abstracts and translations of foreign chemical articles and patents, while Uspekhi Khimii gives extensive reviews of foreign chemical publications. It is quite possible, however, that the relative coverage of foreign chemical publications by these two periodicals will decrease as RZh Khim expands the volume of its abstracting and becomes more firmly established.

Tables 1 and 2 indicate that, as to subject, Soviet emphasis is similar to that of the West. For the sake of comparison, issue No 5, 1953, of RZh Khim and Vol 47, No 20, 1953, of Chemical Abstracts were chosen. The data from Tables 1 and 2 for each periodical were plotted on Figure 1. The similarity of the curves indicates the approximately equal emphasis. The dissimilarity for physical chemistry tends to become minimized in other issues.

Statistical analysis also bears out the predominance of the applied aspects of chemistry in RZh Khim. Table 1 shows that at least one third of all the references are devoted to the subject of chemical technology. This fraction is not as consistent in Chemical Abstracts (see Table 2).

The number of references to literature at present unavailable to the Western scientists that appear in RZh Khim are not very great (less than one percent of the total). Thus, in issue No 2, 1953, which consisted of 1,354 references, only 12 were to unavailable periodicals.

The time lag between the publication of an article in a periodical and the appearance of its abstract varies greatly. It depends on such factors as the degree of circulation of the periodical, detection of the article by an editor, and the availability and efficiency of the abstractor. However, after checking a number of references to such well-known periodicals as Journal of the American Chemical Society and Doklady Akademii Nauk SSSR, it was found that the time lag was about the same for both (4-6 months). For the more obscure periodicals, this time lag was much greater (a year in some cases).

This time lag may vary considerably for the same periodical. Thus, references to the Journal of the American Chemical Society were found that were 8 and 9 months old. This was probably because of a work load on the abstractor. The abstractors themselves are scientists working on various projects and probably do the abstracting in their spare time, as is the case in the US. This is indicated by the names of the persons listed as abstractors in issue No 6, 1953.

Table 3 was included in this report to show how the references were distributed among the Orbit countries. It is seen at a glance that the USSR is the major contributor with East Germany running second. This latter fact is a refutation

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of what was stated on the basis of Issue No 1, 1953, of RZh Khim regarding the scarcity of German references. Another change that has taken place since the publication of Issue No 1, is the change in the heading "General Laboratory Techniques." This heading now reads "General Laboratory Equipment. Quality Control Apparatus."

Certain developments in the succeeding issues of RZh Khim, not apparent in Issue No 1, were also noted. Some abstracts now also include drawings of apparatus or mechanical parts. This is a feature lacking in the abstracts published in Chemical Abstracts. No references to USSR or satellite patents were found in any of the issues of RZh Khim. Also, no dissertations of scientists other than those active in the USSR appeared in issues 1-6, 1953. Issues 1 and 2, 1954, however, do mention a few PhD theses of Western (USA and French) scientists. These theses were published by the universities in their own periodicals. Page 3,731 of RZh Khim, No 6, 1953, contains a list of the abstractors and their fields of specialization. These abstractors contributed to issues 1-6, 1953.

In conclusion, it should be reiterated that it is still too early to make any absolute conclusions on this abstract journal. The above information should be considered only as an indication of trends. Dr. E. J. Crane, the editor of Chemical Abstracts, has this to say of RZh Khim: "This journal is too new for us to know much about its extensiveness, but the abstracts appear to be well-prepared." He made this comment in a short article written for Chemical and Engineering News, Vol 32, No 30, July 26, 1954, p 2,990, entitled "Three Chemical Abstract Journals," where he discusses Chemical Abstracts, Chemisches Zentralblatt, and RZh Khim.

Appended tables and graph follow:

Table 1. Distribution of References by Percent of Total  
(RZh Khim, Issues 1-6, 1953, and Issues 1-2, 1954)

<u>Subject</u>	<u>Issue Number</u>							
	1	2	3	4	5	6	1	2
Chemical Technology	37.8	33.9	34.0	33.6	34.5	36.2	33.4	36.4
Physical Chemistry	17.3	16.1	14.1	11.7	14.5	14.6	13.5	14.5
Biological Chemistry	15.5	15.1	20.6	22.4	24.8	24.6	24.6	22.1
Organic Chemistry	13.7	11.2	10.7	11.2	10.0	9.7	8.9	11.1
Analytical Chemistry	5.2	9.6	5.8	7.2	4.3	5.9	5.6	4.4
Corrosion	3.5	2.7	1.6	3.0	3.0	2.1	5.4	2.6
Processes	2.4	2.2	2.6	3.1	1.8	1.9	2.0	2.2
General	1.2	4.0	3.5	3.4	3.0	2.8	2.1	2.2
Safety and Sanitation	0.8	0.9	0.8	0.7	0.3	0.5	0.9	0.6
Inorganic Chemistry	0.8	1.3	2.0	1.6	1.6	1.1	1.2	1.0
Geochemistry and Hydro-chemistry	0.2	0.7	2.0	0.7	0.8	0.9	0.5	0.8
Quality Control	1.3	2.2	2.2	1.4	1.0	1.3	0.7	2.4

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Table 2. Distribution of References in Percent of Total (Chemical Abstracts)

<u>Subject</u>	<u>Vol 47, No 20</u>	<u>Vol 47, No 21</u>	<u>Vol 48, No 2</u>
Chemical Technology	30.0	27.0	34.5
Physical Chemistry	25.0	21.0	12.6
Biological Chemistry	23.6	35.8	25.6
Organic Chemistry	11.1	7.0	17.6
Analytical Chemistry	3.7	22.2	2.6
Corrosion	--	--	--
Processes	2.3	1.3	2.3
General	--	--	--
Safety and Sanitation	0.9	2.5	1.0
Inorganic Chemistry	3.0	1.7	2.0
Geochemistry and Hydro-chemistry	0.9	1.6	1.4
Quality Control	--	--	--

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Table 3. Distribution of Orbit References (RZh Khim, Issues 1-6, 1953 and 1-2, 1954)

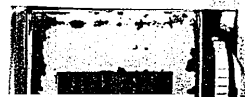
Issue	USSR	Poland	GDR	Czecho-slovakia	Bul-garia	Hungary	Rumania	Communist China	Total Orbit	Total References	Total Non-Orbit
1	320	17	2	8	0	0	2	2	351	1297	946
2	256	25	5	17	1	0	0	1	305	1354	1049
3	277	11	16	16	0	5	1	0	310	1524	1224
4	303	22	34	23	1	6	4	7	405	1787	1382
5	354	23	39	17	2	6	4	0	451	2015	1564
6	293	16	25	31	5	3	6	1	380	2060	1680
1	356	22	35	22	5	15	1	2	458	2236	1778
2	231	20	22	26	4	6	2	5	316	1807	1491

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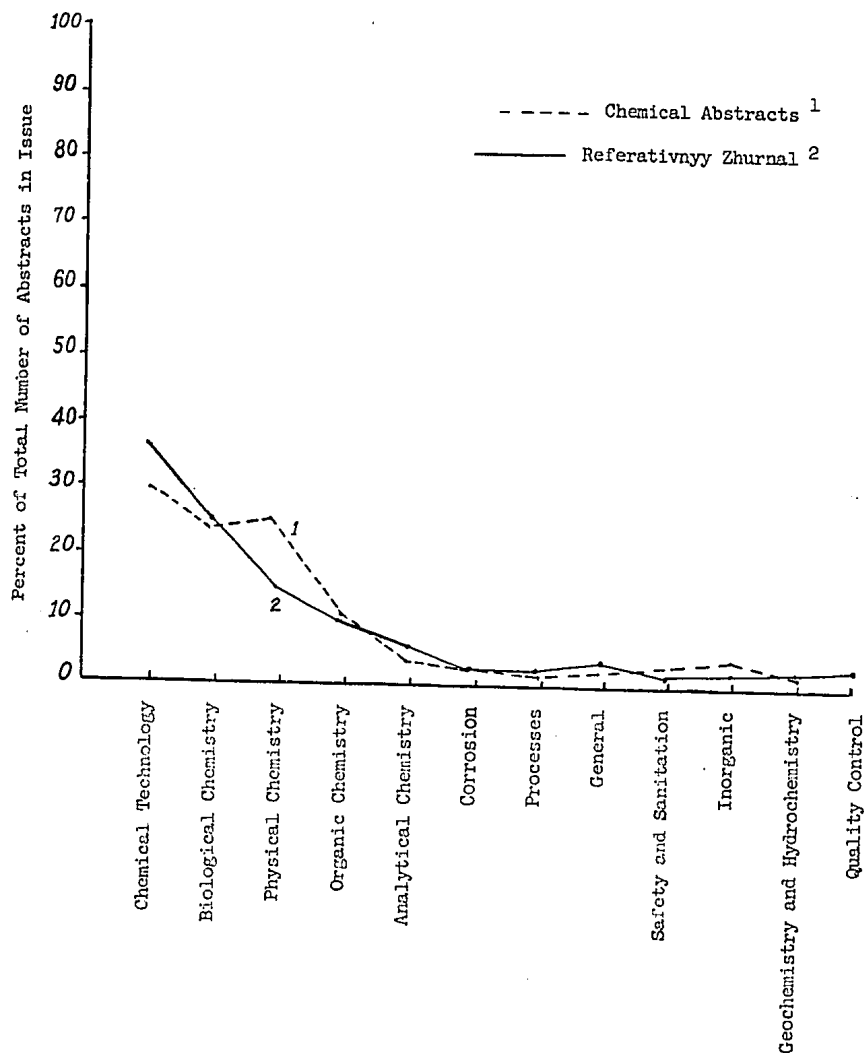


Figure 1

Comparison of RZh Khim with Chemical Abstracts

<sup>1</sup>Vol 47, No 20, 1953

<sup>2</sup>Issue No 5, 1953

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