

## Methods and Results

The Excel file titled “Diamond\_journals\_faculty\_of\_science\_UU” is a shortlist of diamond journals relevant to Biology, Chemistry, Information and Computing Sciences, Mathematics, Physics and Pharmaceutical Sciences. For this study, a “diamond journal” is defined as a journal indexed in the Directory of Open Access Journals (DOAJ) that does not charge Article Processing Charges (APC).

The DOAJ database was downloaded from the DOAJ website (<https://www.doaj.org/docs/public-data-dump/>) on 25 July 2023 and it contained 19.625 journal entries (Table 1, row 1).

### 1. DOAJ Filtering

This database was filtered to select journals that do not charge an APC (column AC, titled “APC” = No) resulting in 13.290 diamond journals (Table 1, row 2).

Next, only journals that allow English submissions were selected by filtering column I (titled “Language”) to have the word “English.”

The resulting list contained 10.014 journals which are diamond journals that allow English submissions (Table 1, row 3).

The list was further narrowed down to only select journals that are relevant to the six science disciplines mentioned above. This was done by only selecting the journals under column AW (titled “Subjects”) that started with the word “Science” (Table 1, row 4). Pharmaceutical Sciences were not available under “Science”: and thereby this category was obtained from the column AW (Subjects) "Medicine", instead of "Science" and narrowed down by the column AW (Subjects) containing “Pharma” resulting in 74 journal entries (Table 1, row5).

The column Science was curated to only contain journals relevant to Biology, Chemistry, Mathematics, Physics and Information and computing science resulting in 734 journals (Table 1, row 7).

To narrow down this list, only journals that screen for plagiarism were included. This was done by selecting the column “Journal plagiarism screening policy” (column I) as “Yes” and resulted in 383 journals (Table 1, row 8).

Out of 383, 28 of them did not have an eISSN thereby **the final number of journals included is 355 journals** (Table 1, row 9).

**Table 1. Overview of the number of journals per filtering step.**

Row	Process	Number of journals	How
1	DOAJ database	19.652	Downloaded from the DOAJ website on 25.07.2023
2	DOAJ+ no APC (no APC)	13.290	APC (column AC) = NO
3	DOAJ +no APC + English	10.014	Language (column I) = contains word "English"
4	DOAJ +no APC + English+ Science	855	Subjects (column AW) = Science
5	DOAJ +no APC + English+ Medicine +Pharma	74	Subjects (column AW) = Medicine + Contains "Pharma"
6	DOAJ+no APC+English+ Science+Pharma	929	Combination of both the Science and Pharma fields

7	DOAJ+no APC+ English+ 6 Disciplines	734	Removed all entries not related to the 6 disciplines but considered "Science" e.g. Geosciences
8	DOAJ +no APC+English + 6 Disciplines + Plagiarism check	383	Journal plagiarism screening policy (column J) =Yes
9	DOAJ +no APC+English + Six Disciplines+ Plagiarism check + eISSN	355	Column eISSN contains a number

## 2. Quality check: Scopus and Web of Science

To assess the quality of the journals, as only 8% of the journals had received the DOAJ seal (<https://doaj.org/apply/seal/>) (Table 2), we checked if the 355 journals indexed in Scopus and Web of Science databases.

Data from **Scopus** were obtained in August 2023 from the website <https://www.scopus.com/sources.uri>. The electronic ISSN (eISSN) was entered into the search engine and connected by using the term "OR". The hits were all downloaded from Scopus using the "Export to Excel" option. All journals which could not be found in Scopus were considered as not indexed in Scopus. In total, **only 42% of the Diamond journals have been indexed in Scopus** (Table 2).

For **Web of Science** indexation, the Science Citation Index (SCI) and Emerging Source Citation Index (ESCI) were downloaded from <https://mjl.clarivate.com/collection-list-downloads-on-1-08-2023>. The listing criteria for a journal to be indexed in SCI and ESCI are available [here](#). The lists from ESCI and SCIE were merged into one unique list. Journal eISSN from the shortlist was checked against the merged ESCI and SCIE. If the eISSN was present in the merged list, then it was considered as Indexed in the Web of Science. None of the journals were present in the July changes 2023 list which is a monthly list posting changes in the databases (such as delisting of journals). Overall, **only 26% of the Diamond journals are indexed in the Web of Science** (Table 2).

**Table 2. Overview of the Diamond journals across disciplines.**

Discipline	Journals number	Number of journals which received a DOAJ Seal	Number of journals which are indexed in Scopus	Number of journals which are indexed in Web of Science
Biology	110	8	50	26
Chemistry	32	4	12	9
Information and Computing Sciences	52	3	15	11
Mathematics	69	4	33	18
Pharmaceutical Sciences	37	2	12	10
Physics	55	8	28	20
<b>Total</b>	<b>355</b>	<b>29</b>	<b>150</b>	<b>94</b>