## Appendix 1. Search strategies of electronic databases

| Nr. | Query                                                                                                                                 | Filters | Results |
|-----|----------------------------------------------------------------------------------------------------------------------------------------|---------|---------|
| 1   | (primary[Title/Abstract] OR baby[Title/Abstract] OR deciduous[Title/Abstract] OR milk[Title/Abstract]) AND (tooth[Title/Abstract] OR teeth[Title/Abstract] OR dental[Title/Abstract] OR dentition[Title/Abstract]) |         | 29,204  |
| 2   | (restorative[Title/Abstract] OR crown[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay[Title/Abstract] OR cavities[Title/Abstract] OR dentine[Title/Abstract] OR lesion[Title/Abstract]) |         | 17,1    |
| 3   | ((restorative*[Title/Abstract] OR crown[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay[Title/Abstract] OR cavities[Title/Abstract] OR dentine[Title/Abstract] OR lesion[Title/Abstract])) AND (primary[Title/Abstract] OR baby[Title/Abstract] OR deciduous[Title/Abstract] OR milk[Title/Abstract]) AND (tooth[Title/Abstract] OR teeth[Title/Abstract] OR dental[Title/Abstract] OR dentition[Title/Abstract]) |         | 1,778   |
| 4   | glass[Title/Abstract] OR polyalkenoate[Title/Abstract] OR ionomer[Title/Abstract] OR cement*[Title/Abstract] OR resin*[Title/Abstract] OR metal*[Title/Abstract] OR composite*[Title/Abstract] OR amalgam*[Title/Abstract] OR compomer*[Title/Abstract] OR Polyacid*[Title/Abstract] OR biomaterial[Title/Abstract] OR bio-active[Title/Abstract] |         | 673,865 |
| 5   | (glass*[Title/Abstract] OR polyalkenoate*[Title/Abstract] OR ionomer*[Title/Abstract] OR cement*[Title/Abstract] OR resin*[Title/Abstract] OR metal*[Title/Abstract] OR composite*[Title/Abstract] OR amalgam*[Title/Abstract] OR compomer*[Title/Abstract] OR Polyacid*[Title/Abstract] OR biomaterial*[Title/Abstract] OR bio-active*[Title/Abstract]) AND (primary[Title/Abstract] OR baby[Title/Abstract] OR deciduous[Title/Abstract] OR milk[Title/Abstract]) AND (tooth[Title/Abstract] OR teeth[Title/Abstract] OR dental[Title/Abstract] OR dentition[Title/Abstract]) |         | 856     |
| 6   | glass*[Title/Abstract] OR polyalkenoate*[Title/Abstract] OR ionomer*[Title/Abstract] OR cement*[Title/Abstract] OR resin*[Title/Abstract] OR metal*[Title/Abstract] OR composite*[Title/Abstract] OR amalgam*[Title/Abstract] OR compomer*[Title/Abstract] OR Polyacid*[Title/Abstract] OR biomaterial*[Title/Abstract] OR bio-active*[Title/Abstract]) AND (primary[Title/Abstract] OR baby[Title/Abstract] OR deciduous[Title/Abstract] OR milk[Title/Abstract]) AND (tooth[Title/Abstract] OR teeth[Title/Abstract] OR dental[Title/Abstract] OR dentition[Title/Abstract]) |         | Humans 689 |
| 7   | (primary teeth[MeSH Terms]) AND (glass*[Title/Abstract] OR polyalkenoate*[Title/Abstract] OR ionomer*[Title/Abstract] OR cement*[Title/Abstract] OR resin*[Title/Abstract] OR metal*[Title/Abstract] OR composite*[Title/Abstract] OR amalgam*[Title/Abstract] OR compomer*[Title/Abstract] OR Polyacid*[Title/Abstract] OR biomaterial*[Title/Abstract] OR bio-active*[Title/Abstract]) |         | 1,49    |
| Number | Query                                                                 | Results |
|--------|----------------------------------------------------------------------|---------|
| 8      | (primary teeth[MeSH Terms]) AND (glass[Title/Abstract] OR polyalkenoate[Title/Abstract] OR ionomer[Title/Abstract] OR cement*[Title/Abstract] OR resin*[Title/Abstract] OR metal*[Title/Abstract] OR composite*[Title/Abstract] OR amalgam*[Title/Abstract] OR compomer*[Title/Abstract] OR Polyacid*[Title/Abstract] OR biomaterial*[Title/Abstract] OR bio-active*[Title/Abstract]) AND (humans[Filter]) AND (((restorati*[Title/Abstract] OR crown*[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay*[Title/Abstract] OR cavities*[Title/Abstract] OR dentine*[Title/Abstract] OR lesion*[Title/Abstract])) AND (primary*[Title/Abstract] OR baby*[Title/Abstract] OR deciduous*[Title/Abstract] OR milk*[Title/Abstract] OR tooth*[Title/Abstract] OR teeth*[Title/Abstract] OR dental*[Title/Abstract] OR dentition*[Title/Abstract])) | Humans 1,417 |
| 9      | ((primary teeth[MeSH Terms]) AND (glass[Title/Abstract] OR polyalkenoate[Title/Abstract] OR ionomer[Title/Abstract] OR cement*[Title/Abstract] OR resin*[Title/Abstract] OR metal*[Title/Abstract] OR composite*[Title/Abstract] OR amalgam*[Title/Abstract] OR compomer*[Title/Abstract] OR Polyacid*[Title/Abstract] OR biomaterial*[Title/Abstract] OR bio-active*[Title/Abstract]) AND (humans[Filter]) AND (((restorati*[Title/Abstract] OR crown*[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay*[Title/Abstract] OR cavities*[Title/Abstract] OR dentine*[Title/Abstract] OR lesion*[Title/Abstract])) AND (primary*[Title/Abstract] OR baby*[Title/Abstract] OR deciduous*[Title/Abstract] OR milk*[Title/Abstract] OR tooth*[Title/Abstract] OR teeth*[Title/Abstract] OR dental*[Title/Abstract] OR dentition*[Title/Abstract])) | 414     |
| 10     | (((dental materials[MeSH Terms]) AND (primary teeth[MeSH Terms])) OR (deciduous dentition[MeSH Terms])) AND (((restorati*[Title/Abstract] OR crown*[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay*[Title/Abstract] OR cavities*[Title/Abstract] OR dentine*[Title/Abstract] OR lesion*[Title/Abstract]))) | 12,496  |
| 11     | (((dental materials[MeSH Terms]) AND (primary teeth[MeSH Terms])) OR (deciduous dentition[MeSH Terms])) AND (((restorati*[Title/Abstract] OR crown*[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay*[Title/Abstract] OR cavities*[Title/Abstract] OR dentine*[Title/Abstract] OR lesion*[Title/Abstract]))) | 881     |
| 12     | (((dental materials[MeSH Terms]) AND (primary teeth[MeSH Terms])) OR (deciduous dentition[MeSH Terms])) AND (((restorati*[Title/Abstract] OR crown*[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay*[Title/Abstract] OR cavities*[Title/Abstract] OR dentine*[Title/Abstract] OR lesion*[Title/Abstract]))) AND (humans[Filter]) | Humans 867 |
| 13     | (((dental materials[MeSH Terms]) AND (primary teeth[MeSH Terms])) OR (deciduous dentition[MeSH Terms])) AND (((restorati*[Title/Abstract] OR crown*[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay*[Title/Abstract] OR cavities*[Title/Abstract] OR dentine*[Title/Abstract] OR lesion*[Title/Abstract]))) | Rando mized Controll ed Trial, Humans 154 |
| 14     | (((dental materials[MeSH Terms]) AND (primary teeth[MeSH Terms])) OR (deciduous dentition[MeSH Terms])) AND (((restorati*[Title/Abstract] OR crown*[Title/Abstract] OR filling*[Title/Abstract]) AND (cari*[Title/Abstract] OR decay*[Title/Abstract] OR cavities*[Title/Abstract] OR dentine*[Title/Abstract] OR lesion*[Title/Abstract]))) | Rando mized Controll ed Trial 155 |
| 15     | (["glass"[Title/Abstract] OR "polyalkenoate"[Title/Abstract] OR "ionomer"[Title/Abstract] OR "cement"*[Title/Abstract] OR "resin"*[Title/Abstract] OR "metal"*[Title/Abstract] OR "composite"*[Title/Abstract] OR "amalgam"*[Title/Abstract] OR "compomer"*[Title/Abstract] OR "Polyacid"*[Title/Abstract] OR "biomaterial"*[Title/Abstract] OR "bio-active"*[Title/Abstract]) AND ("restorati"*[Title/Abstract] OR "crown"*[Title/Abstract] OR "filling"*[Title/Abstract] OR "cari"*[Title/Abstract] OR "decay"*[Title/Abstract] OR "cavities"*[Title/Abstract] OR "dentine"*[Title/Abstract] OR "lesion"*[Title/Abstract]) AND ("primary"*[Title/Abstract] OR "baby"*[Title/Abstract] OR "deciduous"*[Title/Abstract] OR "milk"*[Title/Abstract] OR "tooth"*[Title/Abstract] OR "teeth"*[Title/Abstract] OR "dental"*[Title/Abstract] OR "dentition"*[Title/Abstract])) AND ("control"*[All Fields] OR "random"*[All Fields]) | 410     |
| 16     | ("dental materials"[MeSH Terms] AND "tooth, deciduous"[MeSH Terms] OR "tooth, deciduous"[MeSH Terms]) AND ("restorati"*[Title/Abstract] OR "crown"*[Title/Abstract] OR "filling"*[Title/Abstract] OR "cari"*[Title/Abstract] OR "decay"*[Title/Abstract] OR "cavities"*[Title/Abstract] OR "dentine"*[Title/Abstract] OR "lesion"*[Title/Abstract]) AND ("control"*[All Fields] OR "random"*[All Fields]) | 410     |
Cochrane Library search, 28.12.2020

#1 (glass or polyalkenoate or ionomer or cement* or resin* or metal or composite* or amalgam or compomer* or Polyacid or biomaterial or bio-active):ti,ab,kw (Word variations have been searched) 38813

#2 (primary OR milk OR baby OR deciduous):ti,ab,kw (Word variations have been searched) 18645

#3 (tooth OR teeth OR molar OR dental):ti,ab,kw (Word variations have been searched) 1677

#4 (caries OR decay OR cavities):ti,ab,kw (Word variations have been searched) 944

Embase via Ovid search, 28.12.2020

1 ((glass or polyalkenoate or ionomer or cement* or resin* or metal or composite* or amalgam or compomer* or Polyacid or biomaterial or bio-active) and (primary or milk or baby or deciduous)).ab. 71166

2 (caries or decay or cavities or lesion).ab. 688715

3 1 and 2 5570

4 (restorative or restoration or crown or filling).ab. 269167

5 3 and 4 720
primary OR milk OR baby OR deciduous [Abstract words] and restoration OR restorative OR crown OR filling [Words]

484

primary OR milk OR baby OR deciduous [Abstract words] and restoration OR restorative OR crown OR filling [Abstract words]

395

primary OR milk OR baby OR deciduous [Abstract words] and glass OR polyalkenoate OR ionomer OR cement* OR resin* OR metal OR composite* OR amalgam OR compomer* OR Polyacid OR biomaterial OR bio-active [Words]

0

primary OR milk OR baby OR deciduous [Abstract words] and restoration OR restorative OR crown OR filling [Abstract words] and caries OR cavities OR decay [Abstract words]

107

primary OR milk OR baby OR deciduous [Abstract words] and restoration OR restorative OR crown OR filling [Abstract words] and dental materials [Words]

8