

Additional file 1 to: Can it be checked? A cross-sectional meta-research audit of access to, and reporting in, machine learning studies of pharmaceutical manufacturing and quality control. Phani Kumar Balagam.

PRISMA 2020 checklist

Item numbers and topics follow the PRISMA 2020 statement (Page et al., BMJ 2021;372:n71). The study is a meta-research audit of published papers, so items about risk of bias and certainty of effect estimates do not apply; each is marked and the reason given.

Section	Item	Topic	Where reported in the manuscript
Title	1	Title	Title identifies a meta-research audit; it is not a systematic review of interventions
Abstract	2	Abstract	Structured abstract; PRISMA for Abstracts items reported where applicable
Introduction	3	Rationale	Background, paragraphs 1-3
	4	Objectives	Background, final paragraph (two outcomes, two denominators)
Methods	5	Eligibility criteria	Methods, Eligibility; screening prompt verbatim in Additional file 4
	6	Information sources	Methods, Information sources and search (five sources, searched 23 September 2026)
	7	Search strategy	Additional file 5 (full strings for every source)
	8	Selection process	Methods, Screening; Use of a large language model

Section	Item	Topic	Where reported in the manuscript
Results			(model rater, fixed prompt, full-text re-check)
	9	Data collection process	Methods, Outcome 1; Outcome 2; Use of a large language model
	10a	Data items (outcomes)	Methods, Outcome 1 and Outcome 2; Table 1
	10b	Data items (other variables)	Methods, Outcome 2 (descriptors)
	11	Study risk of bias assessment	Not applicable: the unit is the published paper and the outcomes are properties of its reporting, not effect estimates
	12	Effect measures	Proportions with Wilson 95% CIs; odds ratio per year (Methods, Statistical analysis)
	13a-13f	Synthesis methods	Methods, Statistical analysis; no meta-analysis of effects
	14	Reporting bias assessment	Not applicable (no effect estimates pooled)
	15	Certainty assessment	Not applicable
	16a	Study selection	Results, Search, screening and eligibility; Figure 1
	16b	Excluded studies	Figure 1 (exclusion codes and counts); screening decisions in Additional file 6
	17	Study characteristics	Results, The readable papers; score sheet in Additional file 6
	18	Risk of bias in	Not applicable

Section	Item	Topic	Where reported in the manuscript
		studies	
	19	Results of individual studies	Per-paper values, locators and quotes in Additional file 6 (score_sheet.csv, evidence.jsonl)
	20a-20d	Results of syntheses	Results, Outcome 1 and Outcome 2; Table 2; Figures 2 and 3; Additional file 7
	21	Reporting biases	Not applicable
	22	Certainty of evidence	Not applicable; limitations of the measurement are in Limitations
Discussion	23a-23d	Discussion	Discussion; Limitations; Conclusions
Other information	24a	Registration	Not registered (Methods, Design, protocol and reporting)
	24b	Protocol	Additional file 3 (protocol with SHA-256 digest, fixed before screening)
	24c	Amendments	Additional file 3 (deviations log D-01 to D-12; decision-rule log DR-01)
	25	Support	Declarations, Funding
	26	Competing interests	Declarations, Competing interests
	27	Availability of data, code and other materials	Declarations, Availability of data and materials; Additional file 6