A Scientific Look at Psilocybin Consumption Method: LemonTek

aka the effects of acidic liquids on psilocybin water extracts

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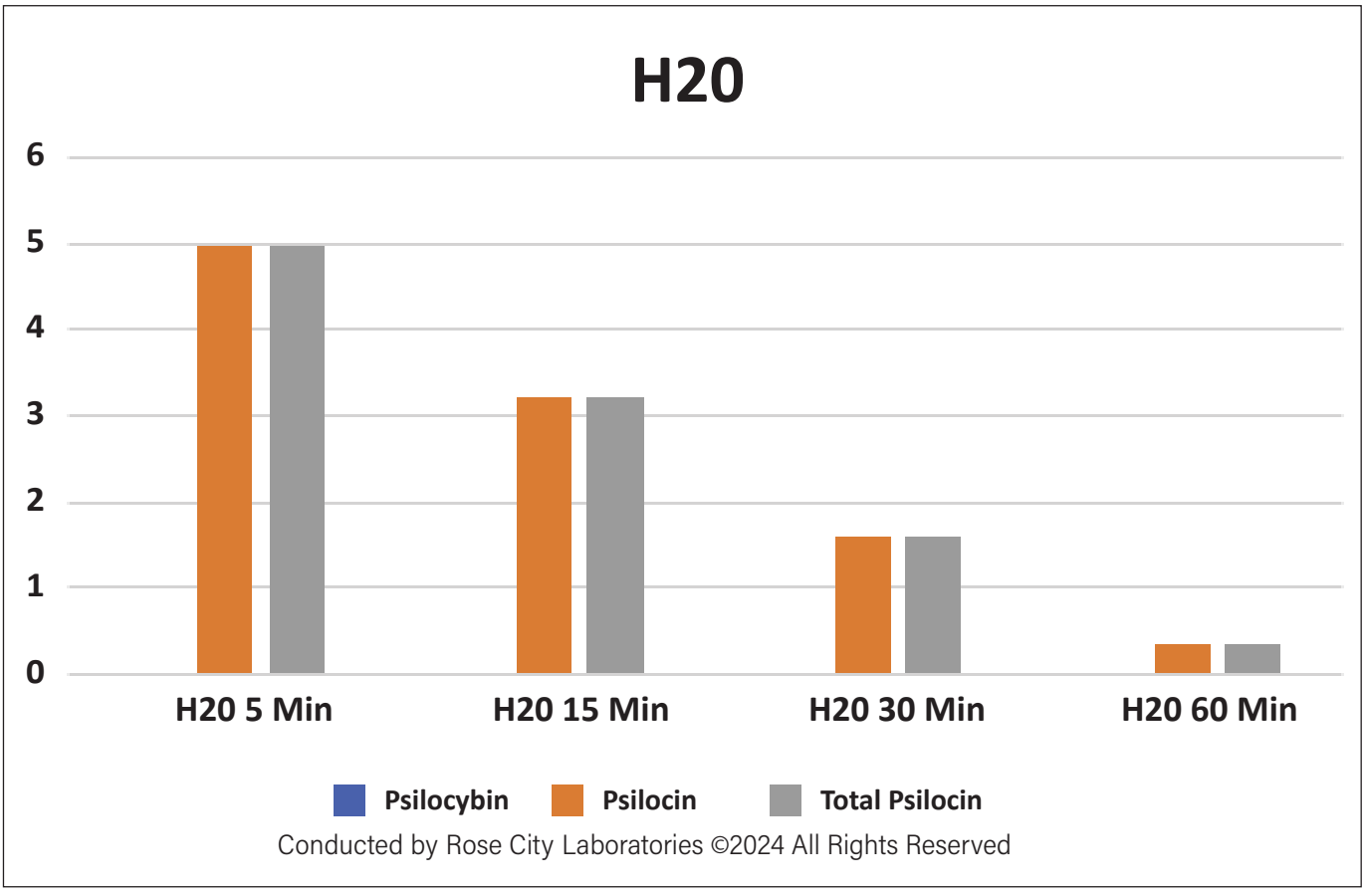
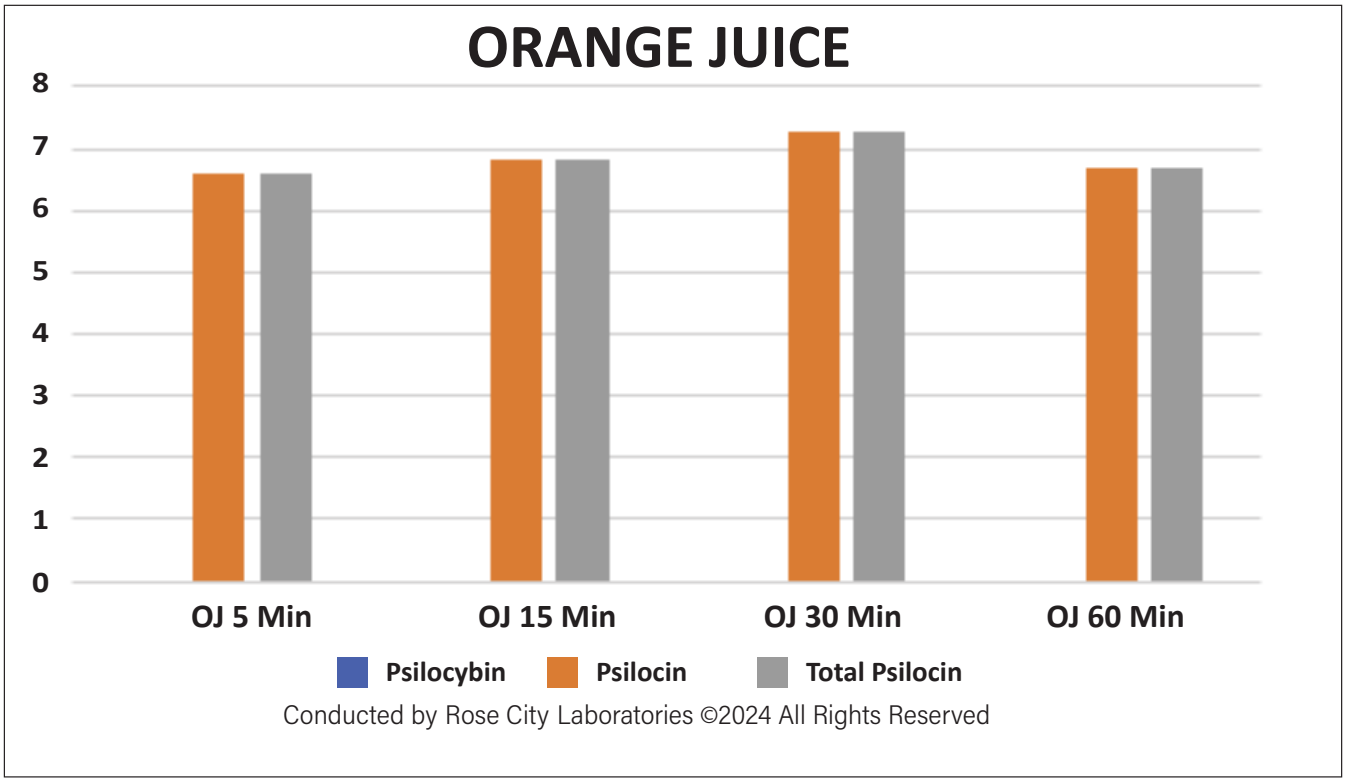
Study Parameters
A homogenized sample of dried psilocybin cubensis fruiting bodies was mixed with room temperature liquids, specifically water as a control, lemon juice, cola and orange juice. The samples were filtered and immediately tested for psilocybin and psilocin content via HPLC after 5, 15, 30 and 60 minutes. For easy potency comparison, total potential psilocin was calculated by multiplying the detected psilocybin content by 0.719 and adding the detected psilocin. The 0.719 value is based on the difference in mol weight between psilocybin and psilocin.

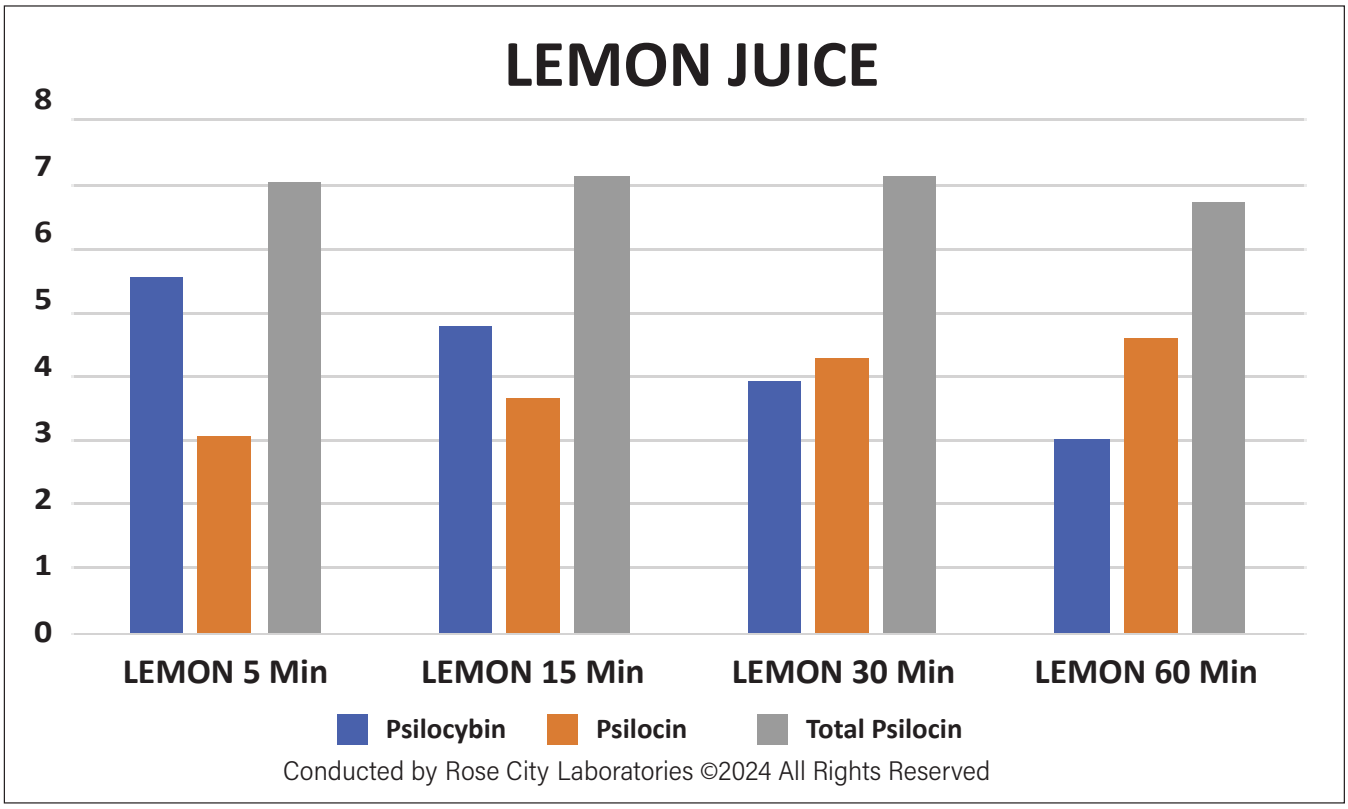
Observations
As expected, adding the dried biomass to plain DI water resulted in an almost instant conversion of all psilocybin into psilocin and the complete degradation of the psilocin within 60 minutes. This was accompanied by the classic blue coloration change of the sample.

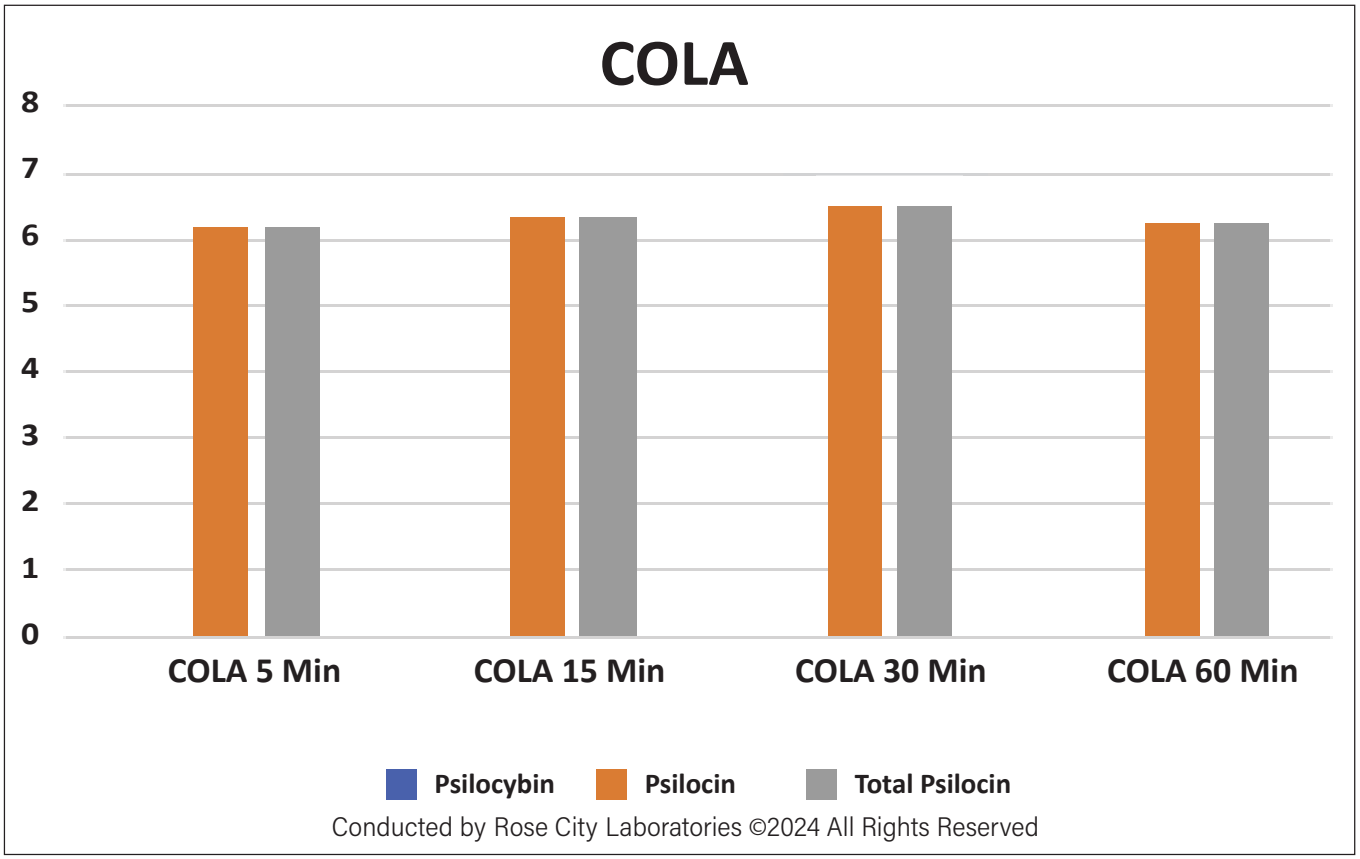


For all other liquids, with the exception of the lemon juice, a similar and almost instant conversion of the psilocybin into psilocin was observed, however, the degradation of the psilocin did not take place and the psilocin/total psilocin content remained relatively stable for the whole 60 minutes.

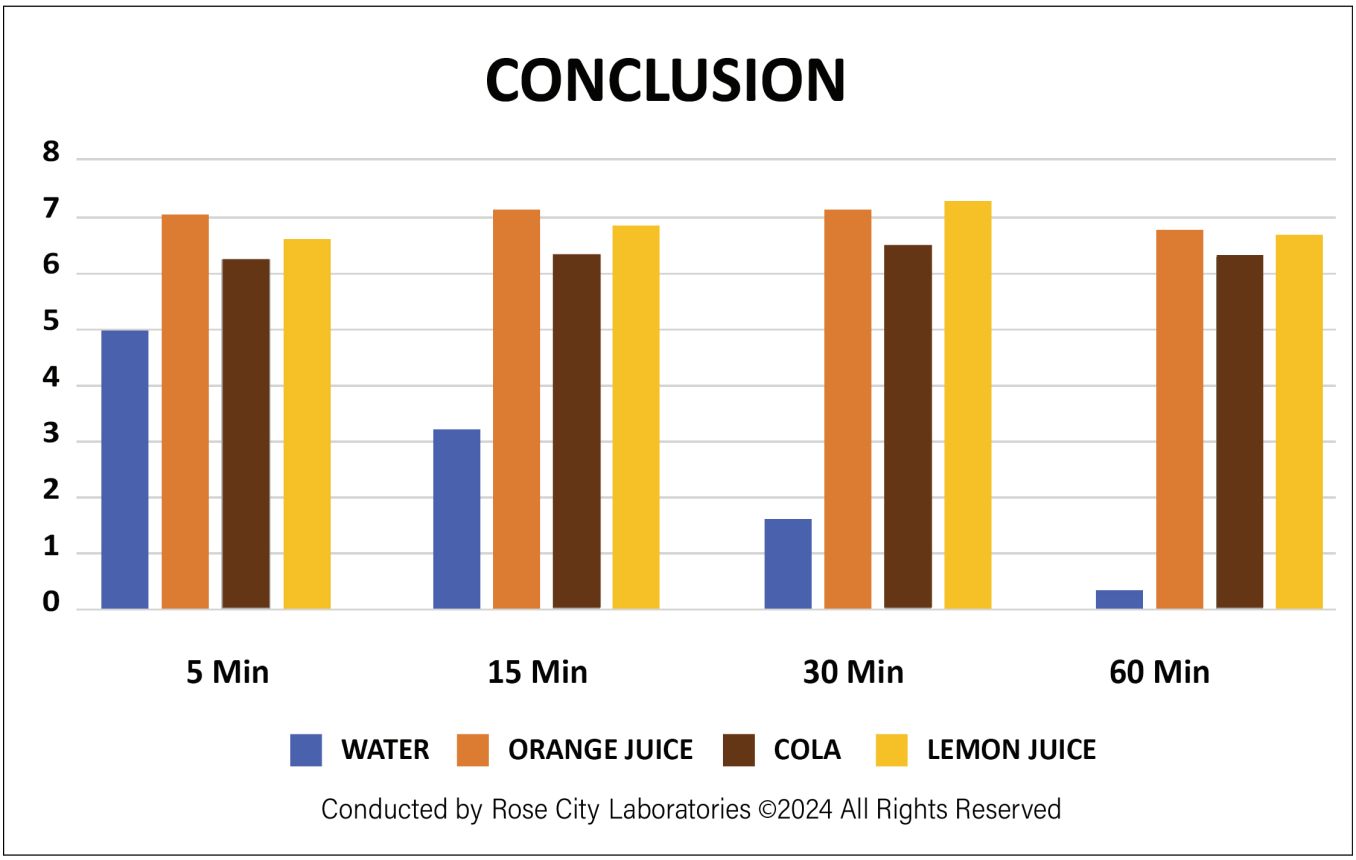


For the lemon juice the conversion of psilocybin to psilocin was much slower and still not completed after the 60 minutes of the test. It also appears that the lemon juice had highest potential psilocin content at the 5- and 15-minute mark.





Total Potential Psilocin (mg/g)



Conclusion

These results seem to support the, mostly anecdotal, claims of the LemonTek, as it appears that lemon juice is the most effective extraction solution when it comes to the 5-15 minutes time frame, which is the likely consumption windows for these extracts. While all acidic liquids showed to slow down the degradation of the psilocin, the lemon juice appears to have an additional effect which delays the dephosphorization of the psilocybin to psilocin. Other claims of the LemonTek, primarily the reduction nausea by breaking down the chitin in the mushrooms could not be confirmed here, but it is clear that further exploration of this topic appears warranted.

	Psilocybin	Psilocin	Total Psilocin	
H2O 5 Min	0	4.95	4.95	
H2O 15 Min	0	3.21	3.21	
H2O 30 Min	0	1.58	1.58	
H2O 60 Min	0	0.31	0.31	
Lemon 5 Min	5.52	3.06	7.03	
Lemon 15 Min	4.79	3.66	7.10	
Lemon 30 Min	3.91	4.29	7.10	
Lemon 60 Min	3	4.57	6.73	
Cola 5 Min	0	6.23	6.23	
Cola 15 Min	0	6.31	6.31	
Cola 30 Min	0	6.47	6.47	
Cola 60 Min	0	6.26	6.26	
OJ 5 Min	0	6.58	6.58	
OJ 15 Min	0	6.81	6.81	
OJ 30 Min	0	7.27	7.27	
OJ 60 Min	0	6.68	6.68	

	5 Min	15 Min	30 Min	60 Min
H2O	4.95	3.21	1.58	0.31
Lemon	7.03	7.10	7.10	6.73
Cola	6.23	6.31	6.47	6.26
OJ	6.58	6.81	7.27	6.68

Summary