

Alcohol consumption in Valencia rockets during Fallas

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It is possible to measure the alcohol consumption of a given population based on the presence of a stable metabolite excreted in urine in wastewaters: ethyl sulphate. The University of Valencia has taken part in this study, which has scientifically quantified the massive spike in drinking in Valencia during local festivities.

A new method for measuring alcohol consumption has scientifically quantified the massive spike in drinking in Valencia during local festivities.

Researchers at the University of Valencia (UV) have developed a technique for measuring a [population](#)'s alcohol consumption in real time based on the levels of metabolic by-products reaching wastewater treatment plants. It has shown that average consumption rockets to 400% during the city's annual festivities, known as Fallas. Indeed, it peaks at up to six times normal levels on the final night.

This will come as no surprise to anyone who has experienced Fallas and lived to tell the tale. Spain in general is well-known for its festive celebrations, from the tomatina in Buñol to Pamploma's bull run and Seville's Holy Week, among many, many others. Valencia is no exception. Fallas is a five-day bonanza of traditional dress, parades, professional-level fireworks and some pretty serious street parties. So serious it would seem that average alcohol consumption shoots up to four times normal levels!

The new technique is based on the detection of ethyl sulphate, one of the more stable chemical compounds released in our urine after we consume alcohol, at the city's wastewater treatment plants. Already used in workplace and rehabilitation centre alcohol testing, this compound is now being proposed as an indicator of [real-time](#) per capita alcohol consumption.

Existing estimations of per capita alcohol consumption rely on surveys and sales figures, which are limited, since they do not take into account either homemade alcohol production, stockpiling or wastage. They can tell us how much we buy, where we buy it and when, and how much we think we drink in an average week, but these indicators cannot accurately reflect how much we actually drink and when.

This research can and, to the mirthful pride off of many a Valencian, just has. "The sewers don't lie!", one regional newspaper has declared, and it's not wrong: ethyl sulphate inevitably finds its way out of our bodies and into [wastewater treatment plants](#), where it can be detected using advanced techniques like those developed at the University of Valencia (specifically, a combination of liquid chromatography and mass spectrometry).

The results show alcohol consumption rise sharply at the start of the five-day holiday to four times normal drinking levels, higher even than your standard weekend drinking. Figures continue to rise until reaching a peak of 600% on 19th March, the official bank holiday, and the day after the final big night of partying.

Indeed, this technique is so sophisticated that it can even reveal what tittle we have over-indulged in. In the case of Valencia during Fallas, beer comes in at first place, accounting for 50% of all alcohol consumed in this period, followed by spirits (28%) and wine (20%).

As researcher Yolanda Picó tells us, this new technique is good news from a health perspective, as it will now be possible to monitor and therefore predict [drinking](#) levels at a particular event or during festive periods, and act accordingly. Peaks in consumption will no longer be diluted into annual and/or nationwide figures, giving us a much more detailed picture of [alcohol consumption](#).

More information: María Jesús Andrés-Costa et al. Estimation of alcohol consumption during "Fallas" festivity in the wastewater of Valencia city (Spain) using ethyl sulfate as a biomarker, *Science of The Total Environment* (2016). [DOI: 10.1016/j.scitotenv.2015.09.126](https://doi.org/10.1016/j.scitotenv.2015.09.126)

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