



REMOTE DETECTION

Cabernet or Crap?

When **Matthew Augustine** talks about wine, he sounds like a beer man. Until a few months ago, the UC Davis chemistry professor thought wine could be stored in an open pitcher. But when Augustine learned that exposure to air can spoil wine, he and grad student April Weekley devised a breakthrough method to test the vintage vino – without popping a single cork.

Augustine and Weekley sample the wares with a scaled-down version of an MRI scanner. They pass each sealed bottle through a nuclear magnetic resonance device, a shallow cylinder about 3 feet across. Then they look at peaks in the NMR spectrum, which “correspond to absorption and emission of radio frequency energy,” Augustine says. “If there’s acetic acid at a level of about a tenth of a gram or more, we’ll see it.” The whole process takes less than 30 seconds.

This could change everything in the high-end wine business, where even the tiniest cork leak can cause damage to the wine – and the wallet. “It’s a risk you can’t do anything about,” says David Wainwright, a wine specialist at Christie’s, which regularly auctions rare vintages for \$2,000 a bottle. Auctioneers say as much as half of pre-1950 vintages are spoiled. So if you’ve got your eye on a \$75,000 bottle of Romanée-Conti, you might want to call Augustine first. – **Douglas McGray**

AN MRI THAT SNIFFS OUT SOUR GRAPES