

# A glass of wine can help find new mineral deposits

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Dr Ryan Noble of CSIRO at work

The key to finding new mineral deposits in Australia could be to start looking with a glass of wine or a soft drink.

In a fascinating piece of spare-time research, CSIRO Exploration & Mining scientist Dr Ryan Noble has found that chemical ingredients in these drinks, including weak organic acids, have the ability to dissolve weakly-bound metals into solution.

“When you mix the drinks with soil, acids dissolve some of the metals into solution, which can then easily be detected in routine laboratory analysis,” Dr Noble said.

The chemical ability of wine and soft drinks makes them very suitable for use as a cheap extraction tool that can be applied to mineral exploration.

“They are particularly good at discovering elevated levels of metals such as silver, zinc, copper and nickel,” Dr Noble said.

Dr Noble and his colleagues were initially a bit ‘tongue-in-cheek’ about carrying out the tests. But they were astounded by the results.

“In many cases, the comparison of metals extracted using wine and soft drink were superior than those extracted using conventional, and much more expensive, commercial solvents,” he said.

Dr Noble is currently working on a number of exploration projects with the Cooperative Research Centre for Landscape Environment and Mineral Exploration (CRC LEME) in Perth.

Results of the testing were presented at the recent 2007 CRC LEME Mineral Exploration Seminar so that the exploration industry could be made aware of and begin using this new, unconventional technique.

The scientists tested red wine and a number of popular soft drinks. The effectiveness of the technique is unlikely to be affected by whether the wine is a shiraz or a malbec and diet soft drinks are just as effective as those containing sugar.

Dr Noble would also like to reassure taxpayers that the research was conducted in the scientists’ spare time. The research had the added

benefit that none of the unused scientific solutions were wasted.

Source: CSIRO

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