

### March 2017 chemistry wordoku

		R												E
	L		I	M	R									I
	E		S	Y										L
S		E		R										M
I		T						M						P
				T		E								R
T				I	M					P				S
			T	L	Y					E				T
							Y							Y

Solve this wordoku in the same way as a sudoku with letters instead of numbers (each of the nine letters in each row, column and nine-square cell). Once solved, one of the overall diagonals can be rearranged into the name of an 18th century chemist

### March 2017 word grid

I	Ti	N
O	Ra	Al
Es	Ir	Ti

**Prize entry:** Using each element symbol in the grid only once, combine them together to make a single word of 15 letters.

Word.....

**Just for fun:** Construct as many other words as you can using a minimum of three symbols, and each symbol only once.  
6 words: OK  
9 words: Good  
12+ words: Excellent

### Entry form

There are four prize puzzles on this page: crossword (cryptic answers only); wordoku; molecule search; and word grid. For each puzzle, a winner will be selected from all the correct entries received and awarded a £25 book voucher. You can only win one of the individual puzzle prizes each month.

If you submit correct entries for all four prize puzzles you will also be entered into a draw to win this month's grand prize\* provided by RSSL:

**Gold Level Membership (1 Jan 17 to 31 Dec 17) - Emergency Response Service.** Find out more at [rsc.li/CWpuzzles](http://rsc.li/CWpuzzles)

Please enter your details below and either post or email this page with your completed entries to us by **20 March 2017**.

Chemistry World puzzles, Royal Society of Chemistry, Science Park, Milton Road, Cambridge, CB4 0WF, UK  
email [chemistryworld@rsc.org](mailto:chemistryworld@rsc.org)

Name .....

Email .....

Tel .....

Participants are advised that any personal information supplied will be processed in connection with this competition and only in accordance with our privacy statement ([www.chemistryworld.com/privacy](http://www.chemistryworld.com/privacy)). In order to claim the grand prize, the winner's personal information will be provided to RSSL.

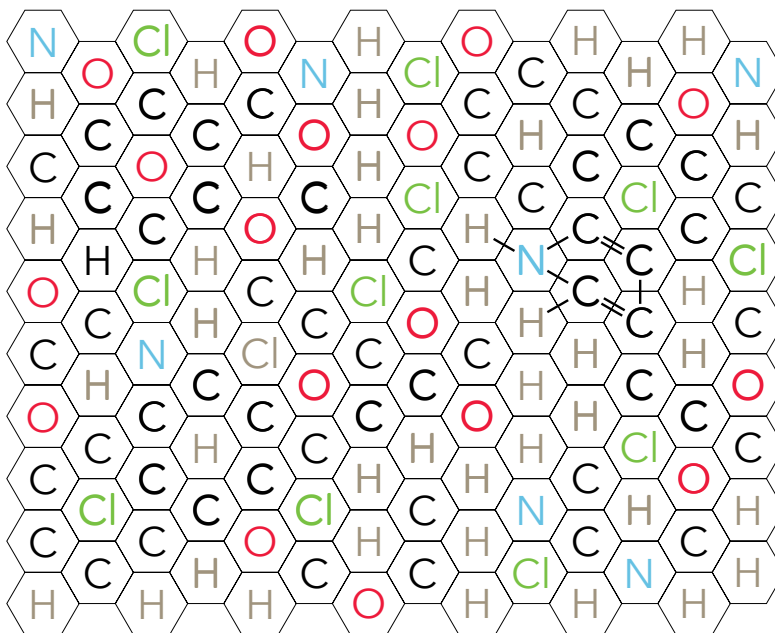
\* Limit of one entry per person before the closing date specified. The winner will be randomly selected and will be contacted directly by RSSL. There is no cash alternative to the winning prize.

RSSL may wish to contact you via email with further information about products and services. Please tick the box if you would like to be contacted by RSSL via email and consent to us sharing your contact details with RSSL for this purpose

### March 2017 crossword

1	2		3		4		5		6		7		8	
9							10							
11					12		13						14	
		15									16			
17					18				19					
20			21								22			
23	24						25		26					
27					28									

### March 2017 molecule search



Connect atoms in adjacent cells using single or multiple bonds to reveal the hidden molecules. The hexagonal grid necessitates some minor distortion of bond angles - for example in the five-membered ring drawn in as a starting point.

Find these three molecules - we've already started one of them for you.  
 $C_8H_2Cl_2O_3$        $C_8H_2Cl_2O_3$        $C_{10}H_8ClNO_2$

Clues: All three molecules contain carboxylic acids; two contain ether links; two are constitutional isomers.

**Cryptic (prize entry)**
**Across**

- 1 Help Bosnia create compound (9, 1)
- 7 Return heartless 'adios' with drink (4)
- 9 More restless about Eastern ridge (6)
- 10 Rifle around material (8)
- 11 La Gioconda hiding her premium (4)
- 12 See 7 down (10)
- 15 Knight's nephew confuses a cosmologist (7, 7)
- 17 Surprisingly cleared isotope for astronomical instrument (5, 9)
- 20 Ed sternly cross about cat (6, 4)
- 22 State I'm often worried about to begin with (4)
- 23 Play on Hamlet with spirit? (8)
- 26 Right away, laminar flow back to physical (6)
- 27, 4 down Reach uphill to German scientist (4, 7)
- 28 Surprisingly shearer cut drink (10)

**Down**

- 2 Agonise about kind serpent (6, 5)
- 3 I romp around vile writer (5, 4)
- 4 See 27 across (7)
- 5 Eggs finished by the sound of it (3)
- 6 Gammon I appreciate contains something smelly (7)
- 7, 12 across I visit Flint-pine about grammatical error (5, 10)
- 8 Didst oddly make a killer (3)
- 13 Flipper friend at the end? (7)
- 14 Dutch scientist wanders around lava (3, 3, 5)
- 16 OK about alien IT creating mineral (9)
- 18 I can't upset it - it sank (7)
- 19 Nat's cross about extraterrestrial instrument (7)
- 21 Group they left upset (5)
- 24 Regular retreat taking an age? (3)
- 25 Gill leaves illegal meadow (3)

**Quick (just for fun)**
**Across**

- 1 European 16th century polymath (10)
- 7 Cog (4)
- 9 Part of a gun (6)
- 10 Druggist (8)
- 11 House type (4)
- 12 Lapsana communis (10)
- 15 Laxative (8, 6)
- 17 Skin specialists (14)
- 20 Functional group R-N=C=O (10)
- 22 Killer Whale (4)
- 23 Members of the mongoose family (8)
- 26 Loch legend (6)
- 27 Part of 14 down (4)
- 28 Consecrating (10)

**Down**

- 2 Lack of ventilation (11)
- 3 Radioactive element used in smoke detectors (9)
- 4 Alcohol (7)
- 5 Drink slowly (3)
- 6 Shellfish (7)
- 7 Russian physicist and cosmologist (5)
- 8 Part of a circle (3)
- 13 Kneecap (7)
- 14 Part of the orchestra (4, 7)
- 16 US State (9)
- 18 Sweet bun, often served toasted (7)
- 19 More verdant (7)
- 21 Polish chemist (5)
- 24 Recede (3)
- 25 Call for help (3)

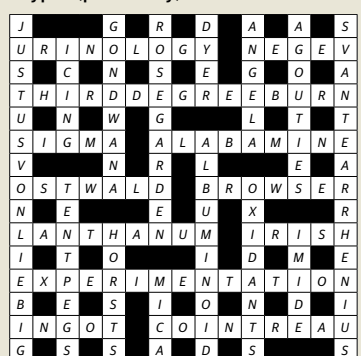
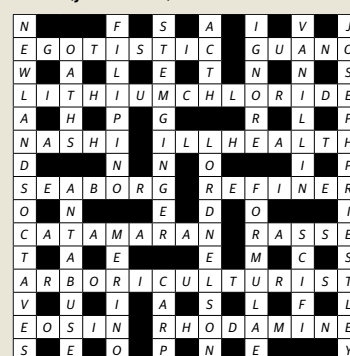
Consumer grade weedkillers are typically glyphosate based, which is not hazardous to the eyes. However, these weedkillers are usually formulated with a talow amine wetting agent, to make the product spread over the weeds, which can be. Once the weedkiller has been diluted ready for use, it's pretty safe, but a splash of concentrated weedkiller is a serious situation. It won't damage the skin but could cause serious eye damage. The gardener should wash his eyes and seek medical attention. He should also consider wearing goggles next time - they aren't just for the lab!

**Answer to On the spot**

**Industry Leading Pharmaceutical Training**

- Wide range of topic areas including:
- Responsible Person
  - Qualified Person (RSC approved)
  - QMS Lead Auditor
  - Good Manufacturing Practice
  - Cleaning Validation
  - Data Integrity
  - And more....

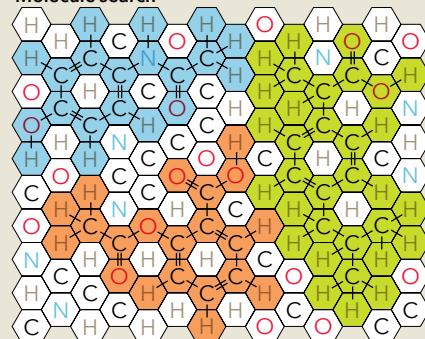
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 Web: **www.rssl.com**


**February 2017 solutions and winners**
**Cryptic (prize entry)**

**Quick (just for fun)**

**Wordoku**

The name of the early chemist was LAVOISIER

**Word grid**

The nine-symbol word was INACCURACIES

**Molecule search**


The three molecules are the widely-used painkillers aspirin, paracetamol (acetaminophen) and ibuprofen

**February winners**

Word grid and overall winner:  
 M Howlett, Wirral, UK

Wordoku  
 U Battaglia, Wilmslow, UK

Molecule search  
 L Colclough, Bromsgrove, UK

Crossword  
 D F Phillpotts, Alveston, UK

**On the spot: Weedkiller spill**
