

# Inorganic "Acid Names" Card Games

www.ausetute.com.au

## To prepare your game cards:

- 1) Print all 5 pages onto stiff A4 paper or card (cheat sheet included at the bottom of this page).
- 2) Cut out all 48 rectangles (game cards) on the next 4 pages.

## To play "acid name" patience (concentration) (1 or more players)

- 1) Shuffle all 48 cards then lay them out face-down (plain side up) in an 8 card by 6 card grid.
- 2) Turn one card over (face-up), then turn another card over (face-up), keep the cards in place in the grid.
- 3) If you have the name of an acid on one card and its corresponding molecular formula on the other card then you have a match. Place this pair of cards face-up in front of you (your "matched pair"), leaving holes in grid.
- 4) If you do NOT have a match, turn both cards over so they are face-down keeping the same grid positions.
- 5) Continue steps (2), (3) and (4) until all the cards have been matched.
- 6) This game can be played by more than one person. Players take it in turns to turn over pairs of cards. The winner is the person who has the most "matched pairs" of cards at the end of the game.

## To play "acid name" rummy (2 players use 1 set of cards, 4 players use 2 sets of cards, etc):

- 1) Shuffle all the cards. Deal out 6 cards face-down to each player. Players put these 6 cards in their hand. The remaining cards are stacked in a pile face-down on the table (the deck). Turn the top card of the deck over face-up and place it next to the deck, this is the discard pile. Nominate a player to begin the game.
- 2) If the player has a matching pair of cards in their hand (the name of an acid on one card and its corresponding molecular formula on the other) they place this "matched pair" face-up on the table and take 2 cards from the deck for their hand (players maintain 6 cards in their hand). Play moves clockwise to the next player.
- 3) If the player does NOT have a matching pair of cards in their hand they have 2 choices, (a) or (b):
  - (a) Take the top card from the deck for their hand and then place 1 card from their hand face-up on top of the discard pile. Play then moves clockwise to the next player.
  - (b) Take the top card from the discard pile for their hand and then place 1 card from their hand face-up on top of the discard pile. Play then moves clockwise to the next player.
- 6) Continue play in this fashion. When the deck becomes depleted, leave the top card of the discard pile face-up on the table, then shuffle the remaining cards and place them in a stack face-down to become the deck.

The game ends when it is no longer possible to maintain 6 cards in your hand.

The winner is the player with the most "matched pairs" of cards.

## To play "acid name" bingo (2 to 4 players):

- 1) Separate the cards into 2 piles, one for the names of acids and the other for the molecular formula of the acids. Shuffle both piles. Each player is dealt 6 molecular formula cards which they keep face-up in front of them, these are their 6 "bingo cards". Any left-over formula cards are piled face-up as the discard pile. The player nominated as the "caller" also has the name cards face-down in front of them in a stack (the deck).
- 2) The "caller" takes the top card from the deck and calls out the name on the card ("called card").
- 3) If a player (including the caller) has the corresponding "bingo card" they claim the "called card" by saying the molecular formula. The "called card" is placed face-down on top of their corresponding "bingo card".
- 4) If no-one claims the "called card" it is placed face-up next to the deck (on the discard pile).
- 5) Repeat steps (2) to (4) until one player has covered all their "bingo cards" with the corresponding molecular formula cards. This player says "bingo" (or "chemistry" if you prefer) and is the winner.

**Cheat Sheet (check your matches)** Note the missing (aq) on the cheat sheet molecular formulae

|                        |  |  |                                   |                                 |                               |
|------------------------|--|--|-----------------------------------|---------------------------------|-------------------------------|
| hydrofluoric acid, HF  | nitric acid, HNO <sub>3</sub>                  | phosphoric acid, H <sub>3</sub> PO <sub>4</sub>  | chloric acid, HClO <sub>3</sub>   | bromic acid, HBrO <sub>3</sub>  | iodic acid, HIO <sub>3</sub>  |
| hydrochloric acid, HCl | nitrous acid, HNO <sub>2</sub>                 | phosphorous acid, H <sub>3</sub> PO <sub>3</sub> | chlorous acid, HClO <sub>2</sub>  | bromous acid, HBrO <sub>2</sub> | iodous acid, HIO <sub>2</sub> |
| hydrobromic acid, HBr  | sulfuric acid, H <sub>2</sub> SO <sub>4</sub>  | carbonic acid, H <sub>2</sub> CO <sub>3</sub>    | hypochlorous acid, HClO           | hypobromous acid, HBrO          | hypoiodous acid, HIO          |
| hydroiodic acid, HI    | sulfurous acid, H <sub>2</sub> SO <sub>3</sub> | perchloric acid, HClO <sub>4</sub>               | perbromic acid, HBrO <sub>4</sub> | periodic acid, HIO <sub>4</sub> | hydrocyanic acid, HCN         |

**hydrofluoric acid**

©AUS-e-TUTE 2018

**HF<sub>(aq)</sub>**

©AUS-e-TUTE 2018

**hydrochloric acid**

©AUS-e-TUTE 2018

**HCl<sub>(aq)</sub>**

©AUS-e-TUTE 2018

**hydrobromic acid**

©AUS-e-TUTE 2018

**HBr<sub>(aq)</sub>**

©AUS-e-TUTE 2018

**hydroiodic acid**

©AUS-e-TUTE 2018

**HI<sub>(aq)</sub>**

©AUS-e-TUTE 2018

**nitric acid**

©AUS-e-TUTE 2018

**HNO<sub>3(aq)</sub>**

©AUS-e-TUTE 2018

**nitrous acid**

©AUS-e-TUTE 2018

**HNO<sub>2(aq)</sub>**

©AUS-e-TUTE 2018

**sulfuric acid**

©AUS-e-TUTE 2018



©AUS-e-TUTE 2018

**sulfurous acid**

©AUS-e-TUTE 2018



©AUS-e-TUTE 2018

**phosphoric acid**

©AUS-e-TUTE 2018



©AUS-e-TUTE 2018

**phosphorous acid**

©AUS-e-TUTE 2018



©AUS-e-TUTE 2018

**carbonic acid**

©AUS-e-TUTE 2018



©AUS-e-TUTE 2018

**perchloric acid**

©AUS-e-TUTE 2018



©AUS-e-TUTE 2018

**chloric acid**

©AUS-e-TUTE 2018

**HClO<sub>3</sub>(aq)**

©AUS-e-TUTE 2018

**chlorous acid**

©AUS-e-TUTE 2018

**HClO<sub>2</sub>(aq)**

©AUS-e-TUTE 2018

**hypochlorous acid**

©AUS-e-TUTE 2018

**HClO<sub>(aq)</sub>**

©AUS-e-TUTE 2018

**perbromic acid**

©AUS-e-TUTE 2018

**HBrO<sub>4</sub>(aq)**

©AUS-e-TUTE 2018

**bromic acid**

©AUS-e-TUTE 2018

**HBrO<sub>3</sub>(aq)**

©AUS-e-TUTE 2018

**bromous acid**

©AUS-e-TUTE 2018

**HBrO<sub>2</sub>(aq)**

©AUS-e-TUTE 2018

**hypobromous acid**

©AUS-e-TUTE 2018

**HBrO<sub>(aq)</sub>**

©AUS-e-TUTE 2018

**periodic acid**

©AUS-e-TUTE 2018

**HIO<sub>4(aq)</sub>**

©AUS-e-TUTE 2018

**iodic acid**

©AUS-e-TUTE 2018

**HIO<sub>3(aq)</sub>**

©AUS-e-TUTE 2018

**iodous acid**

©AUS-e-TUTE 2018

**HIO<sub>2(aq)</sub>**

©AUS-e-TUTE 2018

**hypoiodous acid**

©AUS-e-TUTE 2018

**HIO<sub>(aq)</sub>**

©AUS-e-TUTE 2018

**hydrocyanic acid**

©AUS-e-TUTE 2018

**HCN<sub>(aq)</sub>**

©AUS-e-TUTE 2018