*Source: National Science Week* 

Science



# **Colour Change Cocktails**

# **BUTTERFLY BLUE PEA FLOWER**

Butterfly Blue Pea Flower (scientific name Clitoria ternatea) is also referred to as blue-pea, aprajita, Cordofan pea or Asian pigeonwings. It is a plant commonly found throughout South East Asia. The bright blue petals from the flowers of the butterfly-pea plant have been used for centuries as ingredient in herbal tea drinks and in cooking. The blue flower's colour is leached when steeped in warm or hot water. This has led to it being used as a natural dye and food colouring.

# **BUTTERFLY BLUE PEA FLOWER EXTRACT SYRUP**

In these recipes we are using b'Lure butterfly pea extract by Wild Hibiscus Flower Co. It is made in Australia and can be purchased online from a range of suppliers including directly from the producer.

This is a non-alcoholic, sugar based syrup (so is sweet) that can be used in drinks, cooking or baking.

It is an acid base indicator and changes colour from blue through to pink depending on pH.

- The extract only changes in a pH range of 8 to 2
- From pH 8 to pH 4 is will be blue
- At pH 3 it will change to royal purple
- At pH 2 it will change to bright pink
- pH scale is from 1 to 14
- 1 to 6.9 = acidic
- 7 = neutral (neither acidic or basic)
- 7.1 to 14 = basic

#### The pH of some common food and drink:

- Apple juice 3.3 4 (acidic) Coke 2.4 (acidic)
- Lime 2 2.8 (acidic) Gin 3 6 (acidic)
- Lemon 2 2.6 (acidic) Vodka 6 7 (acidic)
- Cow Milk 6.4 6.9 (slightly acidic) Prosecco 3.25 (acidic)
- Water should be around 7 (neutral) Champagne 2.9 (acidic)
- Soda water 3 4 (acidic) Bicarbonate of soda 8.3 (basic)
- Tonic Water 2.5 (acidic)





# **VIOLET VODKA SODA**

#### WHAT YOU NEED

#### Ingredients

Vodka (30mL is one standard drink) Soda Ice Fresh lemon or lime wedges b'Lure butterfly pea extract

#### Equipment

Liquid measure Serving glass

#### **METHOD**

- 1. Add 4 squirts (around 3 to 3.5mL) of b'Lure butterfly pea extract to glass.
- 2. Add vodka and ice.
- 3. Mix gently to blend.
- 4. Serve to guest with soda and lemon/ lime on side so they can watch the colour changes in front of their eyes.
- 5. Sip and enjoy!

# **GIN AND TONIC**

### WHAT YOU NEED

#### Ingredients

Gin (30mL is one standard drink) Tonic Fresh lemon or lime wedges b'Lure butterfly pea extract

**Equipment** Liquid measure Serving glass

#### **METHOD**

- 1. Add 4 squirts (around 3 to 3.5mL) of b'Lure butterfly pea extract to glass.
- 2. Add gin and ice.
- 3. Mix gently to blend.
- 4. Serve to guest with soda and lemon/lime on side so they can watch the colour changes in front of their eyes.
- 5. Sip and enjoy!

# **SPARKLING PURPLE**

#### WHAT YOU NEED

#### Ingredients

Sparkling wine or prosecco (120mL is one standard drink) b'Lure butterfly pea extract

#### Equipment

Serving glass

#### **METHOD**

- 1. Add 2 squirts (around 1.5 to 2mL) of b'Lure butterfly pea extract to glass.
- 2. Top up with bubbles
- 3. Sip and enjoy!

#### WANT TO TRY SOME OTHER SUGGESTIONS?

How about using filtered water and extract to make ice blocks that change drink colour as they melt?

#### Want the kids to have a go?

Use lemonade with fresh lemon for a non-alcoholic beverage.

Keep experimenting, you're only limited by your imagination.



# OTHER USES FOR BUTTERFLY PEA FLOWER

Butterfly pea flower tea is also a popular drink. It is made from dried flowers and changes colour depending on what is added to the liquid. Lemon juice is a common addition and turns the beverage purple.



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