

## APA SH Zula z trawą cytrynową

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **25**
- SRM **4.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **4 %**
- Size with trub loss **13 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **15.6 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **10.1 liter(s)**
- Total mash volume **12.9 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **10.1 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **15.6 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield  | EBC |
|-------|----------------------|----------------|--------|-----|
| Grain | Strzegom Pilzneński  | 1 kg (35.7%)   | 80 %   | 4   |
| Grain | Viking Pale Ale malt | 0.5 kg (17.9%) | 80 %   | 5   |
| Grain | Pszeniczny           | 0.5 kg (17.9%) | 85 %   | 4   |
| Grain | Wheat, Flaked        | 0.5 kg (17.9%) | 77 %   | 4   |
| Grain | Carahell             | 0.25 kg (8.9%) | 77 %   | 26  |
| Grain | Acid Malt            | 0.05 kg (1.8%) | 58.7 % | 6   |

### Hops

| Use for             | Name | Amount | Time     | Alpha acid |
|---------------------|------|--------|----------|------------|
| Boil                | Zula | 20 g   | 15 min   | 13.3 %     |
| Aroma (end of boil) | Zula | 20 g   | 0 min    | 13.3 %     |
| Dry Hop             | Zula | 60 g   | 5 day(s) | 13.3 %     |

### Yeasts

| Name                 | Type | Form   | Amount | Laboratory |
|----------------------|------|--------|--------|------------|
| FM52 Amerykański Sen | Ale  | Liquid | 30 ml  | ---        |

## Extras

| Type        | Name            | Amount | Use for  | Time   |
|-------------|-----------------|--------|----------|--------|
| Spice       | Trawa cytrynowa | 10 g   | Boil     | 10 min |
| Water Agent | gips piwowarski | 2 g    | Boil     | 60 min |
| Other       | Witamina C      | 2 g    | Bottling | ---    |