

## Banach-Tarski paradox - Dunkelweizen v.2.0

- Gravity **12.4 BLG**
- ABV ---
- IBU **17**
- SRM **19**
- Style **Dunkelweizen**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

### Steps

- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **68 C**, Time **30 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **68C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pszeniczny | 2.5 kg (55.6%) | 81 %  | 6   |
| Grain | Strzegom Karmel 150 | 1 kg (22.2%)   | 75 %  | 150 |
| Grain | Strzegom Pilzneński | 1 kg (22.2%)   | 80 %  | 4   |

### Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | Hallertau | 30 g   | 60 min | 4.5 %      |

### Yeasts

| Name                   | Type  | Form   | Amount | Laboratory       |
|------------------------|-------|--------|--------|------------------|
| FM41 Gwoździe i Banany | Wheat | Liquid | 30 ml  | Fermentum Mobile |