

BIPA

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **64**
- SRM **14**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.1 liter(s)**
- Total mash volume **24.5 liter(s)**

Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **19.1 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (91.7%) | 80 % | 5 |
| Grain | Strzegom Karmel 150 | 0.25 kg (4.6%) | 75 % | 140 |
| Grain | Carafa II | 0.2 kg (3.7%) | 70 % | 812 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|----------|------------|
| Boil | Magnum | 30 g | 50 min | 9.2 % |
| Boil | Green Bullet | 20 g | 30 min | 12.2 % |
| Boil | Mandarina Bavaria | 15 g | 20 min | 9.8 % |
| Boil | Mandarina Bavaria | 25 g | 10 min | 9.8 % |
| Boil | Mandarina Bavaria | 20 g | 5 min | 9.8 % |
| Dry Hop | Mandarina Bavaria | 40 g | 5 day(s) | 9.8 % |
| Dry Hop | Green Bullet | 20 g | 5 day(s) | 12.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11.5 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------|---------------------|--------|---------|--------|
| Spice | Skórka pomarańczowa | 100 g | Boil | 10 min |