

Książniczkowe 2.0

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **75**
- SRM **4.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **6 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.1 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20.1 liter(s)** of **76C** water or to achieve **31.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (90.9%) | 80 % | 6.5 |
| Grain | Płatki owsiane | 0.25 kg (4.5%) | 85 % | 3 |
| Grain | Płatki pszeniczne | 0.25 kg (4.5%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|----------|------------|
| First Wort | Warrior | 10 g | 90 min | 15.1 % |
| Boil | Warrior | 30 g | 60 min | 15.1 % |
| Aroma (end of boil) | mosaic | 35 g | 5 min | 13.2 % |
| Aroma (end of boil) | citra | 35 g | 5 min | 12.5 % |
| Whirlpool | mosaic | 35 g | 30 min | 1 % |
| Whirlpool | citra | 35 g | 30 min | 1 % |
| Dry Hop | mosaic | 30 g | 3 day(s) | 13.2 % |
| Dry Hop | citra | 30 g | 3 day(s) | 12.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|--------------|-----|-----|--------|-----------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |
|--------------|-----|-----|--------|-----------|