

# Galaxy Single Hop Rye Ale

- Gravity **12.4 BLG**
- ABV ---
- IBU **38**
- SRM **6.4**
- Style **Rye IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **4 %**
- Size with trub loss **22.2 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 **3.6 liter(s) / kg**
- Mash size **18.5 liter(s)**
- Total mash volume **23.7 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **8 min**

## Mash step by step

- Heat up **18.5 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **8 min** at **76C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt | 3 kg (58.3%)   | 82 %  | 4   |
| Grain | Viking Rye Malt     | 2 kg (38.8%)   | 63 %  | 9   |
| Grain | Abbey Castle        | 0.15 kg (2.9%) | 80 %  | 45  |

## Hops

| Use for | Name   | Amount | Time     | Alpha acid |
|---------|--------|--------|----------|------------|
| Boil    | Galaxy | 10 g   | 60 min   | 13.3 %     |
| Boil    | Galaxy | 10 g   | 30 min   | 13.3 %     |
| Boil    | Galaxy | 15 g   | 15 min   | 13.3 %     |
| Boil    | Galaxy | 25 g   | 0 min    | 13.3 %     |
| Dry Hop | Galaxy | 40 g   | 4 day(s) | 13.3 %     |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |

## Extras

| Type        | Name                       | Amount | Use for | Time   |
|-------------|----------------------------|--------|---------|--------|
| Water Agent | Łuska ryżowa sterylizowana | 100 g  | Mash    | 0 min  |
| Water Agent | Gips Piwowarski            | 4 g    | Mash    | 60 min |