

# APA 13 blg

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **32**
- SRM **5.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **27.9 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **20 min**

## Mash step by step

- Heat up **21.4 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **20 min** at **77C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount        | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 3 kg (46.2%)  | 80 %  | 5   |
| Grain | Viking Pilsner malt  | 2 kg (30.8%)  | 82 %  | 4   |
| Grain | Viking Munich Malt   | 0.5 kg (7.7%) | 78 %  | 18  |
| Grain | Viking Wheat Malt    | 0.5 kg (7.7%) | 83 %  | 5   |
| Grain | Viking Vienna Malt   | 0.5 kg (7.7%) | 79 %  | 7   |

## Hops

| Use for             | Name                      | Amount | Time     | Alpha acid |
|---------------------|---------------------------|--------|----------|------------|
| Boil                | Columbus/Tomahawk/Zeus US | 15 g   | 60 min   | 15.5 %     |
| Boil                | Chinook                   | 15 g   | 20 min   | 9 %        |
| Aroma (end of boil) | Cascade PL                | 20 g   | 3 min    | 5.2 %      |
| Dry Hop             | Cascade PL                | 20 g   | 3 day(s) | 5.2 %      |
| Dry Hop             | Chinook                   | 20 g   | 3 day(s) | 9 %        |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 20 g   | LA FARGE   |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 10 g   | Boil    | 15 min |