

Single Hop APA - Ella

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **43**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **15.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **79 C**, Time **10 min**

Mash step by step

- Heat up **9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **79C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **15.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.5 kg (83.3%) | 80 % | 5 |
| Grain | Weyermann - Rye Malt | 0.2 kg (6.7%) | 85 % | 7 |
| Grain | Weyermann - Dark Wheat Malt | 0.1 kg (3.3%) | 85 % | 14 |
| Grain | Weyermann - Diastatic Barley | 0.2 kg (6.7%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Boil | Ella (AUS) | 5 g | 60 min | 14.6 % |
| Boil | Ella (AUS) | 10 g | 20 min | 14.6 % |
| Aroma (end of boil) | Ella (AUS) | 10 g | 10 min | 14.6 % |
| Aroma (end of boil) | Ella (AUS) | 5 g | 5 min | 14.6 % |
| Dry Hop | Ella (AUS) | 20 g | 7 day(s) | 14.6 % |

Yeasts

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

| | | | | |
|--------------|-----|-----|-------|--------|
| Safale US-05 | Ale | Dry | 5.5 g | Safale |
|--------------|-----|-----|-------|--------|