Inference at $*$
of proof for Lemma list_extensionality:

$\vdash \forall T$:Type, a, b:(T List).
($\|a\| = \|b\|$) $\Rightarrow$ ($\forall i$:$\mathbb{N}$. ($i < \|a\|$) $\Rightarrow$ ($a[i] = b[i]$)) $\Rightarrow$ ($a = b$)
by ((UnivCD)
CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 2:n),(first_nat 3:n
)) (first_tok SupInf:t) inil_term)))·

1:

1. T : Type
2. a : T List
3. b : T List
4. $\|a\| = \|b\|$
5. $\forall i$:$\mathbb{N}$. ($i < \|a\|$) $\Rightarrow$ ($a[i] = b[i]$)

$\vdash a = b$

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http://www.nuprl.org/FDLcontent/p0_963683_/p122_97646_{list_extensionality}.html